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INSIDE DOPE 64 GEORGE E TAUBENECK

Story of the Week Travel Notes Encouraging Sign Union Refuses Raise Words Fail Us Face It, Friends

Story of the Week

Favorite story of Richard Finnegan, publisher of the *Chicago Times*, dates 'way back to the time when a wealthy butcher's daughter decided to crash the society pages by staging a big-time musical "soiree" in her plush mansion.

For the piece de resistance of this musicale she hired Fritz Kreisler, who was then at the zenith of his powers and popularity. She offered him \$5,000 for the engagement.

"Of course," she explained, after they had agreed upon the fee, "you will not consort with my guests."

Kreisler bowed low.
"How thoughtful of you," he
murmured. "Since you are so gen-

erous, I'll play for only \$3,000."

Travel Notes

Apparently the railroads have discovered all over again that the customer is an important person.

Riding the New York Central "Twilight" train from Detroit to Chicago with John Massimi of Kelvinator, we were startled by the service and the entertainment. Periodically the Pullman porter made amusing little speeches to the entire car. And a conductor edified us with some sleight-of-hand tricks.

From Chicago to Kansas City, on the Santa Fe, while enjoying the companionship of Paul Brennan and Bud Kelly of Frigidaire, not only the porter and the dining car waiters were extra-accommodating, but two pretty, uniformed hostesses tried to keep us pleased, also.

Retiring rather late on that train, we were scrubbing our molars in a dimly-lit washroom. The ancient conductor—one of those near-pensioners who were so surly and nasty during the war period—poked his head in and inquired:

"May I turn up the lights for you, sir?"

The Old Traveller is expected to

It was snowing when we left Detroit, but in Kansas City the Weather was perfect. Found Sam Glass of Koch driving a breezy convertible in his shirt-sleeves.

Paul Shapiro of Superior Refrigeration Supply greeted us at the hotel with a tan so burnished you'd have thought he had spent the winter in Florida. He had acquired it right in Kansas City, though—playing golf.

Ever wonder if undertakers are human? Well, guess they are. While in Kansas City, J. H. Schmall snuck us into the Muehlebach hotel, which was then playing host to a big convention of morticians.

You guessed it: They're wild men away from home. Sleep was practically impossible in the hotel that night.

"Dope" has delivered speeches in all sorts of environments during the last two decades, but our talk before a small Kansas City refrigeration group marked the first time we ever spoke in a railroad station.

It was a slick place, though. Fred Harvey has fixed up a dandy banquet room in the Kansas City Union Station, and they say it's in use six hights a week.

Another innovation: Before the peech, Chairman Earl Morgan of (Concluded on Page 11, Column 1)

ASRE, ASHVE Ready Programs For West Coast Meetings Early In June

NEW YORK CITY—Twelve technical papers and a series of entertainment and social events topped by a dinner-dance at Earl Carroll's Theater-Restaurant have been lined up for the 34th spring meeting of the American Society of Refrigerating Engineers in Los Angeles June 9-11.

It will be the first national ASRE meeting to be held on the west coast in 30 years.

The Los Angeles section will act as host. Hotel Alexandria, located at Fifth and Spring in the center of the downtown district, is the convention headquarters.

In one of the technical talks, Charles S. Leopold, consulting engineer and past president of ASRE, will present what is described as "a revolutionary approach to the problem of heat transfer in panel cooling." It is announced that Mr. Leopold will show how much of the accepted engineering thought on panel cooling and heat storage is in error and tell how proper calculations should be made.

Some of the entertainment in store for members includes a tour through moving picture and broadcasting studios, sightseeing trips to Catalina Island and Mount Wilson Observa-(Concluded on Page 28, Column 1)

Commercial Shipments Up In Last Quarter

WASHINGTON, D. C.—Shipments of air conditioning and commercial refrigeration equipment and components for the fourth quarter of 1946 were valued at \$36.9 million, a high for any quarter of the year, according to a report just issued by the Bureau of Census.

Almost all major classes of equipment continued to increase. Condensing units were up in number from 183,000 to 269,000 and in value from \$14.4 million to \$19.1 million. Heat exchanger equipment was up from \$10.9 million to \$11.4 million.

While the number of self-contained air conditioning units shipped dropped slightly from the third quarter, the value was up from \$5.4 million in the third quarter to \$6.3 million in the fourth.

Tabulated reports on fourth quarter sales as reported by the Bureau of Census will be found on pages 26 and 27.

Air Conditioning Equipment Orders Outrun Shipments

CHICAGO—Air Conditioning equipment orders "are going on the books faster than shipments leave the plant," Cloud Wampler, president of Carrier Corp., told a recent meeting of executives at the Bond Club here.

He said if worthwhile reductions can be made in agricultural prices and construction costs, "the American economy has a good chance of holding at a satisfactory production rate." He believed 1947 and 1948 would be good business years, although the production rate of activity may not hold at the present high levels.

Mr. Wampler based his belief that business would in general be good over the next few years on the accumulated need for goods.

Freezer Manufacturers Plan Meeting June 3-5

WASHINGTON, D. C.—The Farm and Home Freezer Manufacturers Association will hold a three day meeting at Virginia Beach, Va. on June 3-5, E. G. Vail, executive secretary, has announced.

NEW YORK CITY—During their semi-annual meeting in Coronado, Calif., June 2-4, members of the American Society of Heating and Ventilating Engineers will hear nine technical papers and engage in a number of special entertainment

Committees have arranged for the engineers to take a look at several nearby scenic spots, go deep-sea fishing, play golf, and inspect the Navy Yard and Consolidated Aircraft's San Diego plant. Social activities will be topped off with the semiannual banquet on Tuesday, June 3.

Headquarters for the meeting will be the Hotel del Coronado, situated on a peninsula overlooking the Pacific Ocean on one side and San Diego Bay on the other. Registration will start on Sunday, June 1, at 10 a.m.

Monday, Tuesday, and Wednesday mornings will be devoted mainly to (Concluded on Page 25, Column 3)

Frigidaire Makes 'Meter Misers' In Commercial Sizes

DAYTON, Ohio—A new light-weight, rotary refrigeration mechanism for commercial and industrial application is being introduced by Frigidaire Division of General Motors.

The new refrigerating mechanism is basically of the same design as Frigidaire's household "Meter Miser" unit, which has been installed in more than four million refrigerators and other products manufactured by the company. W. F. Switzer, commercial sales manager, described the new development as "one of the most important milestones in Frigidaire's long refrigeration history."

The new unit consists of a rotary compressor and motor assembly housed in a single, steel cylinder-shaped case. It weighs a little more than 85 pounds.

The compressor has two parts that move—the impeller and divider block. Compressor is operated by a direct drive from the motor.

The condenser is mounted on a doughnut-shaped liquid refrigerant receiver, which wraps around the assembly. A small horizontal electric fan, mounted on the top and concealed by a grille, cools the unit. The mechanism is sealed and self-oiling.

"Three models of varying capacities known as the MM-1, MM-2, and MM-3 are being produced by the company," Mr. Switzer stated. "The new unit is adaptable to a wide variety of commercial installations requiring re(Concluded on Page 4, Column 5)

Heads Newa



E. B. INGRAHAM

Wholesalers Get 'Storm Warnings'

ATLANTIC CITY, N. J.—Storm warnings of some possible rough business weather ahead and suggestions for some steps to be taken to avoid trouble, were given to members of the National Electrical Wholesalers Association during their recent convention here.

John L. Busey, retiring president of Newa and president of the General Electric Supply Corp., pointed out that—

that—

"In less than two years the wholesale distributor has gone from an enviable liquid position, with cash and government securities, to a point where those securities and cash (and probably some additional borrowed capital) have been converted into merchandise.

"Past experience indicates that prices will go down and it would seem that prudence requires first a logical reduction of inventories, and next careful control to keep inventories safely in line with requirements."

Investments in accounts receivables are another problem facing wholesalers, Mr. Busey said. He also pointed to the attitude of some manufacturers who, viewing the prosperity of the wholesaler, are inclined to believe that the wholesaler can operate on shorter margins.

"Some action has been taken in this direction, evidencing a dangerous trend of thinking which could well continue unless some erroneous assumptions are effectively disproved."

As a means of boosting sales of major appliances, the Appliance Division of Newa recommended that manufacturers affix to each appli(Concluded on Page 28, Column 4)

Dealer Must Clear Trade-In Under FHA Lien

If Trade-In Not Released From Mortgage, Dealer Can't Reclaim Replacement

WASHINGTON, D. C. — If an appliance dealer accepts a traded-in appliance which is covered by the house mortgage from a home financed under Title II (New Construction) of the National Housing Act, and replace it with a new appliance on which a balance would remain due, he should make certain that the traded-in appliance has first been released from the house mortgage lien.

Otherwise, he may find himself without the power to repossess the appliance he sold, authoritative industry sources have pointed out.

One cannot mortgage property having a previous lien on it without the mortgagor's consent, they noted. In the above case, the new appliance would merely be replacing the old one as part of the real estate upon which the original mortgage was granted, it was indicated.

B. C. Bovard, general counsel for the Federal Housing Administration, explained in a letter to the NEWS that appliances originally covered by FHA insured mortgages can be released from the original mortgage by the holder of the mortgage with the consent of the FHA commissioner.

This release would, of course, be subject to terms and conditions imposed by the holder of the mortgage and such additional requirements as might be made by the commissioner to protect his interests as insurer of the original mortgage, he said.

Releases are individually considered and approved by the commissioner upon the basis of the particular facts involved in the specific case, Mr. Bovard declared.

Bovard declared.

The position of the FHA in regards to appliance covered by FHA insured mortgages was outlined to the NEWS by the FHA general counsel

as follows:

"The commissioner is authorized under Title I of the National Housing Act to insure lending institutions against losses sustained by them as a result of loans made 'for the purpose of financing alterations, repairs, and improvements upon or in con-

nection with existing structures."
"Prior to the amendment of the National Housing Act in 1938, eligible improvements under Title I included the purchase and installation of refrigerators and similar appliances because the Act at that time contained the additional words—"and the purchase and installation of equipment and machinery upon such real property."

"The Congress purposely omitted such language from the provisions of the Act by the 1938 amendments, and such loans have not been eligible since that time.

"In view of the legislative history of Title I, it seems clear that the (Concluded on Page 4, Column 3)

Last Straw

Salesmen's Union Is Latest Threat

NEW YORK CITY—"Salesmen's unions—which many employers say is the 'last straw'—are gaining strength on the West Coast, in wine, liquor, and chemicals," declares the Wall Street Journal.

"The unions seek to limit discussions and night courses held on the salesman's time," says the *Journal*. "Irate sales managers say they operate against improving the salesman's earning power, which is sharpened by these sessions."

Pre-packaged 'Bulk' Ice Cream Sales From Open Case Up Profits for Dairy

SALT LAKE CITY—Using an open, self-service case designed for frozen foods, Al Harris, dairy operator here, has just introduced a prepackaged merchandising scheme for hand-dipped ice cream which he thinks will boom sales while it slashes overhead.

On a recent Sunday (May 4), Mr. Harris reports that he came within \$50 of his best day all last summer and employed only four people instead of the eight formerly required. The customers are better satisfied, too, he's sure.

Retail milk and ice cream depots are operated by the Harris dairy, and Mr. Harris plans to have this new type of ice cream merchandising plan in 10 outlets, including other ice cream stores and his own outlets.

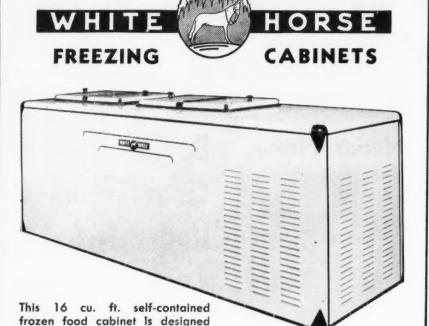
The pre-packaged ice cream is dis-

played in an open Hussmann frozen food case which was installed by Refrigeration & Equipment Co., Hussmann dealer in Salt Lake City.

Ice cream is packaged in the con-

lce cream is packaged in the conventional hand-dipped cartons with the top flaps left open so the ice cream itself can be seen. After the package is filled and weighed, a cellophane bag is placed over it, bottom side up, and sealed at the bottom of the carton. This gives a clear view of the contents. Often a few nuts are placed on top of the ice cream to make a more attractive package.

Actual packaging operation is performed during the week in her spare time by one girl who tends the counter, explains Mr. Harris. The packaging is done in the back room, (Concluded on Page 25, Column 1)



Available in 10, 16, and 24 cu. ft. sizes. The 24 cu. ft. is remote control. The 16 cu. ft. can also be had as remote control. These cabinets can be furnished with or without refrigerating units. All White Horse Cabinets are finished in white, vitrous Porcelain Enamel. Immediate delivery.

to meet the needs of Restaurants,

Inns, Stores, Homes, etc.

Write and see if this valuable franchise is taken in your territory.

Manufactured by

WHITE HORSE CABINET COMPANY

HARLEYSVILLE, PENNSYLVANIA

Refrigerated Trailers Keep Air Line Cargo Fresh

NEW YORK CITY-Mobile refrigerated trailer units are currently helping United Air Lines' air cargo department facilitate transfer of perishable goods from Cargo liners to ground transport.

In use at five key stations along United's route, the specially-designed 1,325-cu. ft. refrigerated trailers proved themselves particularly vital during the recent Easter rush of cross-

country flower shipments. The accompanying photograph, for instance, shows cargo men at Chicago unloading a consignment of daffodils directly from a refrigerated plane to a

Quigley Heads Revived

Frigidaire Markets Div.

DAYTON, Ohio - H. M. Kelley,

Frigidaire appliance sales manager

has announced re-establishment of the

Special Markets Division of the

company's appliance sales department

along with the promotion of C. E.

Quigley to manager.
The Special Markets Division will

handle quantity, home freezer, re-

placement, farm, school plan sales.

with Frigidaire for 21 years. He has

served as zone manager, regional

manager, and assistant manager of

the commercial sales department.

Mr. Quigley has been associated

Since the mobile refrigerator can maintain a temperature adjustable from 0° to 50° F., flowers and other perishables can be kept garden-fresh from the time of shipment until their destination is reached.



Commercial Credit Rise Of 150% Shows 'Healthy State of U.S. Industry'

BALTIMORE—An increase of over 150% in the active accounts of the Commercial Financing Division of Commercial Credit Co. is reported by F. M. Nicodemus, vice president in charge of the division.

Dollar volume of such financing amounted to over \$167,000,000 in 1946 and will be well over a quarter of a billion this year if business continues at its present rate.

The increase indicates a healthy state of U.S. industry, Mr. Nicodemus stated, since eight out of ten of the firms seeking additional capital are expanding production to meet unexpectedly large sales volume. Sums sought range from \$10,000 to figures in the millions and applications represent every type of industry in the nation.

West Coast Firm To Build

LOS ANGELES-Building permit has been issued for construction of a corrugated iron factory building at 4550 East Dunham St., Los Angeles, for the General Air Conditioning Co. The structure will contain 10,250 square feet and will cost \$50,000.

25-Ton Carrier Unit Air Cools St. Louis Candy Factory

Parent of

ST. LOUIS-The Busy Bee Candy Co., manufacturer of chocolates, hard candy, and deluxe gift candies of all types, has installed a 25-ton Carrier air conditioning unit to solve summer operation problems in its plant here.

The 25-ton unit was installed by the Thomas Sheehan Co., plumbing and air conditioning firm here, and is sufficient to keep a room 104 × 50 feet at a temperature between 58° and 60° F., according to Howard Halt, engineer on the job. Included in the room, are chocolate finishing lines, the packing counter where gift boxes are packed with assorted candies, chocolate melting and preparation vats, and storage space for ingredients to be used in the candy.

Forty employes work in the 60° F., wearing sweaters or jackets, and report that they much prefer the cool atmosphere to handling chocolate and hard candies which become sticky and unmanageable under summer

With refrigerated display cases in three company-owned stores, and three agency stores in the St. Louis area, Busy Bee Co.'s chocolates are now under refrigeration from the moment they are made until purchase by the consumer.

New Universal Plant To **Up 'Freezmaster' Output**

LOS ANGELES-Leasing by Universal Refrigeration Co. of the Century Aircraft plant at 5601 West Century Blvd., Inglewood, is announced by Roy Neuer, president of Universal.

The new location, which provides 148,000 sq. ft. of space, was to have been occupied May 15. It's facilities will quadruple the production capacity for the company's "Freezmaster" line of frozen food display cases and commercial and home refrigeration equipment.

Both offices and plant of the company were formerly located at 1854 South Western Ave. This location will be retained as a showroom.

SURPLUS INVENTORY!

SCARCE ITEMS IN ORIGINAL CARTONS... Having discontinued our line of Home Freezers that we might devote all of our facilities to the production of AMERI-THERM PACKAGED AIR CONDITIONERS, the

following scarce items are offered for immediate disposal at very attractive prices:

> 19 Sets HINGES, LATCHES and STRIKES -National Lock Company 1" Offset

150 THERMOSTATS WITH ALARM SIG-NAL CONTACTS-Ranco, type B-Range Minus 10° to 0° F.

3,350 Ft. RUBBER REFRIGERATOR DOOR GASKET, 10 Ft. lengths, Jarrow **Products**

285 WIRE GRIDS, 15" x 17 1/2", BRIGHT ZINC FINISH (Similar to Refrigerator

5,850 Ft. STAINLESS STEEL TEE MOULD-ING, 3/8" x 15/16"

2,000 SLIDE BUTTON SWITCHES, Cutler Hammer #8304

New

3 Phase

220/440 Volt

50/60 Cycles

ELECTRIC

3 H.P.,

2,000 SLIDE BUTTON SWITCHES, Cutler Hammer #8411

100 #78 EDWARDS "DIXIE" DOOR BELL TRANSFORMERS, 110 to 10 Volt.

100 EDWARDS DIXIE-NU-BELL DOOR BELLS.

1,000 JUNCTION BLOCKS

300 WABASH ACTEX UNITS—Combination Capillary tubes and receivers 5/16" flare.

102,000 #1 ROUNDHEAD 1/8 x 3/8" SOFT **ALUMINUM RIVETS**

ADDITIONAL SURPLUS ITEMS:

162 "KING" COMBINATION HOSE NIP-PLES-1/2" IPS

94 "KING" COMBINATION HOSE NIP-PLES-3/4" IPS

99 "KING" COMBINATION HOSE NIP-PLES-1" IPS

200 TUTTLE & BAILEY "FLEXAIR" GRILLES #64-36" x 10"

75 TUTTLE & BAILEY "FLEXAIR" GRILLES #64-28" x 8" 200 TUTTLE & BAILEY "FLEXAIR"

GRILLES #70—36" x 14" 75 TUTTLE & BAILEY "FLEXAIR" GRILLES #70-28" x 12"

* QUANTITY OF ALCO MULTI OUTLET F-12 EXPANSION VALVES, Models TO2-2F, TO3-4F, TS4-6F, TU6-7F

* ALCO SOLENOID VALVES, 220 Volts, 60 Cycles-Models S-120, S-225, M-344, M-635

Crated

MOTORS

OPEN Type, Sleeve and Ball Bearings

WEIGHT 2 DUNCES NIBCO 1/2" COSTS ONLY little AS MUCH

MAKE COPPER PLUMBING AVAILABLE IN LOW COST HOUSING . . .

HERE'S the amazing story of NIBCO engineering genius and the benefits it has brought to you through twenty years of continuous development and research. When NIBCO introduced copper plumbing in 1928, a $\frac{1}{2}$ " Tee weighed 18 ounces and cost 76 cents. Today it weighs only 2 ounces, yet it is stronger, easier to handle and better in many ways . . . and even in an inflated copper market, it still costs less than 20 % of the original price! NIBCO WROT Fittings are made by patented processes which assure absolute uniformity with close tolerances accurately maintained. Specify NIBCO WROT Fittings on all jobs. They make stronger joints . . . and every copper installation brings you more business.

NORTHERN INDIANA BRASS COMPANY . ELKHART, INDIANA

AMERICAN THERMAL INDUSTRIES, INC. Detroit 7, Michigan 2501 Bellevue Dept. S, Plaza 1560

(WELL KNOWN MAKES)

(LIMITED QUANTITY)

ATTRACTIVE PRICES

1800 R P M

High Starting Torque

5 H. P., 7½ H. P.

MORE PROFIT · EASIER WORK · BETTER TOO

hat makes e difference What's this Kelvinator salesman got that his competitors would give their eye-teeth to have? Is it the obvious sales advantage of such features as the gleaming Cold-Ban trim around the cabinet opening? . . . the big Frozen Food Chest? . . . Moist-Master Refrigeration? That's only part of the story! These plus features, wonderful as they are, have an equally powerful factor behind them that really closes the sale.

That factor is the salesman's unqualified confidence in his product... the conviction that makes his sales story ring true and prompts the urge to buy!

Candy , hard of all arrier mmer here. ed by mbing e, and 1 × 50 n 58° oward cluded ishing where sorted prepae for candy. 0° F., nd ree cool te and sticky mmer ses in and Louis es are n the pur-

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n cazmascases
igeracom: 1854
cation

He is convinced of the "hidden values" in Kelvinator that give longer life and greater customer satisfaction over the years. The Kelvinator cabinet sides and top are one-piece . . . without seams or crevices. The Permalux finish is tough . . . brilliantly white . . . stays white! The food compartment liner is also one-piece . . . porcelain on both sides for permanency. And Kelvinator's exclusive Polarsphere unit is sealed in steel, permanently lubricated for matchless, trouble-free performance!

It's things like these that support the conviction that Kelvinator is a superior product . . . a conviction shared alike by the man who sells and the woman who buys.

Vital, too, is Kelvinator's great Vocation-in-Sales Program that provides every Kelvinator retail organization with full support in building a sound, successful business future!

You build a future with RETAIL-MINDED

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

DIVISION OF NASH-KELVINATOR CORPORATION . DETROIT 32 . MICHIGAN

york refrigeration air conditioning

McCray

KOLDFLO

4 Retail Salesmen

Sell these two top lines under closed franchise to 200,000 people. Retail sales percentage gain highest in U.S

W. C. BRADSHAW CO.

Distributor

Air Conditioning — Refrigeration 420 BROADWAY PHONE 44688 FRESNO, CALIF.

WANTED! REFRIGERATION ENGINEERS

Here is an opportunity for several experienced capable household refrigeration design and production engineers to become associated with one of the leading home freezer manufacturers. Permanent, responsible positions and salary com-

Also, a similar opportunity for several engineers experienced in refrigeration cabinet design and production.

Write for further information today—all correspondence held in strict confidence.

REFRIGERATION DIVISION AMANA SOCIETY

AMANA, IOWA

(Concluded from Page 1, Column 5) commissioner would not be authorized to insure improvement loans to finance the purchase or installation of refrigerators, stoves, and similar appliances, regardless of whether or not the borrowers declared an intention to regard them as a part of the real estate.

"The test of eligibility under Title I is primarily whether the realty would be improved, as for example, in the purchase and installation of a complete plumbing system, or the improvement of the existing plumbing system through the installation

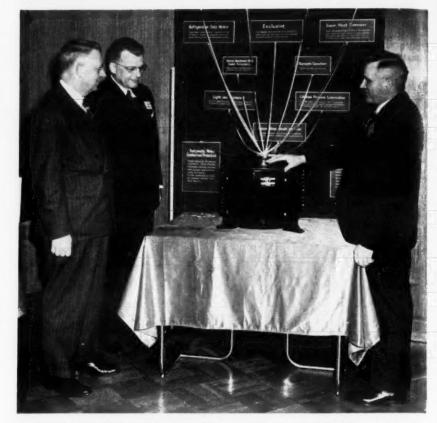
of a new sink, bathtub, or lavatory.
"In doubtful cases, specific requests should be submitted to this office for determination as to eligibility for Title I financing.

"The insurance of mortgage loans under Titles II (New Construction) and VI (emergency sales and rental housing) of the National Housing Act is to be distinguished from the insurance of improvement loans in connection with existing structures under Title I.

"Mortgages are accepted for insurance under Titles II and VI only after individual processing by this Administration, including the placing of a valuation upon the specific property which is to be purchased or constructed with the proceeds of the mortgage.

"Certain items of equipment and appliances may be given consideration in the FHA valuation of the property where the mortgagee and mortgagor are willing to consider such items as real estate, and where the mortgage instruments specifically

Dealer Must Clear -- Commercial-Size Model of the 'Meter-Miser' Unit



The new Frigidaire "Meter-Miser" condensing unit for commercial and industrial application, patterned after the household version, gets the once-over here from E. R. Godfrey, Frigidaire's general manager; P. M. Bratten, general sales manager; and S. M. Schweller, chief engineer.

include them as a part of the mortgaged property.

"The express understanding of the mortgagee and mortgagor that the items are a part of the real estate is expressed on the FHA commitment to insure the loan, which identifies each such item and is signed by both the mortgagee and mortgagor.

"In each instance, the mortgageeholder of the mortgage to be insured under Titles II or VI must be in a position to certify that the mortgage constitutes a good and valid first lien on the property described therein, and the mortgagor must execute a statement that after the mortgage offered for insurance has been recorded, the mortgaged property, including the easily removable real estate items, will be free and clear of all liens other than the mortgage.

"The mortgagor, in this manner, must specifically acknowledge that the easily removable real estate items are fully paid for.

"After the mortgage instruments have been executed and endorsed for insurance, the release of any portion of the property from the mortgage lien may be effected by the mortgagee, with the consent of the commissioner.

"Such a release would, of course, be subject to such terms and conditions as may be imposed by the

Frigidaire Makes --

(Concluded from Page 1, Column 3) mote-type refrigerating mechanism."

"Simplicity of design and precisionbuilt parts, machined down to a tenthousandth of an inch, have reduced vibration and operational noise to a minimum," Mr. Switzer declared.

All electrical controls and relays are grouped in a control box, located on one side of the unit, complete with a removable cover.

Mr. Switzer pointed out that tools. facilities, materials, and technique. employed by Frigidaire in the manufacture of the household version of "Meter-Miser" were readily adaptable to the production scheme of the new unit.

"We will be able to take full advantage of production lines that are turning out thousands of Meter-Misers for household application," he stated.

mortgagee, as the holder of the mortgage, and to such additional requirements as might be made by the commissioner to protect his interests as insurer of the mortgage.

"Requests for partial releases of security are individually considered and approved by the commissioner upon the basis of the particular facts involved in the specific case.'

Just look at the picture... it shows why INNER-SEAL is better

In this cutaway of INNER-SEAL weatherstripping, you can see how the tough steel spring-wire provides high strength. You can see that this wire is molded right into live sponge rubber to give flexibility. Because of this, you can turn sharp corners and follow complex curves with INNER-SEAL.

This resilient rubber makes a soft. tight seal that effectively shuts out

weather, dust, moisture. It can be frozen to rock hardness, yet quickly regains its softness on thawing.

INNER-SEAL has proved its worth in many fields . . . door-seals for all types of refrigerators and refrigerated carriers. It is used in aircraft, trucks, busses, ships, and railway cars, Write for samples and complete information on standardized colors and sizes now available for immediate shipment.



The NAT Corporation of Kansas City



Combines Appearance and Performance with PRACTICAL Design

Finished Crackled Brown or Hammered Grey Baked Enamel announces.

THE NEW

(self contained)

AIR CONDITIONER

The Nat Air-conditioning Unit's unique design, based on 17 years of research directed by Nathan Baraban, makes it-

The Answer to the Service-Man's Prayer

All working parts are accessible without having to tear down the cabinet. A saving of time and labor.

The NAT Unit comes in 3 sizes: 3.0, 4.2 and 5.4 Tons

Sold through exclusive dealers and distributors some territory still open - inquiries invited

the NAT Corporation

2710 McGee Trafficway • Phone HA. 1892 • KANSAS CITY, MISSOURI The Nat Corporation also manufactures the NAT Suspended Gas-Fired Unit Heater THE ALCO THERMO-LIMIT VALVE Ask for Bulletin 152. ALCO VALVE CO. 853 KINGSLAND AVE. . ST. LOUIS 5, MO.

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Midwest Wholesalers To Meet In Colorado Springs

COLORADO SPRINGS, Colo.—The Midwest Refrigeration Equipment Wholesalers Association will hold its Spring meeting at the Broadmoor hotel here on June 5 and 6, L. W. Krueger, secretary, has announced.

Two closed meetings, a joint luncheon and meeting with manufacturers, a cocktail party, and a banquet are scheduled for those two days, he said. Ervin Hexter of Refrigeration Industry will address the gathering, he added.

the gathering, he added.

On the weekend immediately following the meeting, delegates may participate in ice skating, golf, swimming, and trips to Pikes Peak, the Cheyenne Mountains, and the Cave of the Winds, Mr. Krueger declared.

Arrangements are being made with Western Air Lines to have one or two 44 passenger planes fly to Los Angeles those who wish to attend the American Society of Refrigerating Engineers convention there on June 9 to 11, Mr. Krueger said. It is a 3½ hour trip, he asserted.

New and Used Units In Cleveland Surplus Sale

CLEVELAND—Both new and used surplus refrigeration equipment is being offered in a closed bid sale ending May 22 by the local office of the War Assets Administration.

Equipment available includes a new General Electric condensing unit, a used reach-in milk cooler, rivet and oil coolers, freezers, and Revco refrigerators.

U.S. Grant Supply In Expansion Program

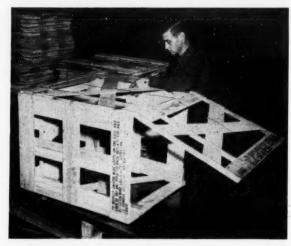
LOS ANGELES—U. S. Grant Supply Co. here has recently announced a three-point expansion program intended to aid its dealers.

A dealer service division has been created within the company's advertising department for the purpose of assisting its dealers with direct mail and other advertising problems, floor displays, and sales training programs.

To further help dealers with bank credit and in setting up flooring, and similar plans, Grant's credit department has formed another special division, the company announced.

As the third step in the Grant company's dealer aid program, branch sales offices have been set up in San Diego, Calif. and Tucson, Ariz.

Seeger Condensing Unit Crate Wins Packaging Prize



The prize-winning wirebound crate used by the Seeger Refrigerator Co. to ship refrigeration condensing units is quickly assembled by one workman. No nails are used in making or assembling the crate.

CHICAGO — A wirebound wood crate used by the Seeger Refrigerator Co. to carry refrigeration condensing units from its Evansville, Ind., factory won the first prize blue ribbon, emblematic of outstanding excellence among shipping containers, at the Protective Packaging Contest in Chicago April 30.

The contest, which attracted entries from shipping containers of various materials and types of construction, was a feature of the second annual Industrial Packaging and Materials Handling Exposition of the Industrial Packaging Engineers Association of America, which was held at the Hotel Sherman April 29 through May 1.

The first prize winner was entered under the name of R. J. Bauer, assistant purchasing agent of the Seeger Refrigerator Co. The 17-pound nailless crate carries an 85-pound condensing unit made for the Coldspot refrigerator featured by Sears Roebuck & Co.

Entries in the contest were judged by a committee of packaging and shipping experts, who carefully considered such things as initial cost of the container; ease and economy of packing it; re-useability; weight; sturdiness, strength and protection afforded contents; economy of space in shipping, and other factors.

L. F. Funke, chief engineer, Evansville Division of the company, said the firm has experimented with and tested other types of shipping containers, but never has found a shipping package to replace wirebounds.

The prize winner is a Rock fastener wood wirebound crate assembled without nails. The 85-pound unit (the larger unit weighs 100 pounds) is carried on wooden cleats attached at the box factory to the inner surface of the crate sides. This is an excellent sample of wirebound crate designing for a specific job.

The crates come knocked-down in three pieces—the four sides flat in one piece, the top, and the bottom—for storing in minimum space before being used. They are easily and quickly assembled by one worker, who fastens the top and bottom of the crate to three of the sides by the Rock fastener wire loops, which enhance the crate's structural strength and its ability to absorb shipping shocks and jars.

Packing is simple. The open fourth side of the crate is placed flush against a conveyor carrying the finished condenser units and one workman easily slides a unit from the conveyor directly onto the carrying cleats inside the crate. The door-like side is quickly closed and fastened with the Rock fastener wire loops and the package is ready to be shipped.

The only extra packaging material required in the crate that won the prize is kraft paper wrapped around part of the condensing unit to protect it from dust and moisture. In the other and larger crate of the same design, a wooden "collar" is slipped over and bolted to the condenser. The "collar" supports the condenser on the carrying cleats.

The sturdiness of the crates allow them to be stacked five high, when ceiling height will permit, without damage to the bottom crate. The loaded crates are shipped four high, 252 large ones and 475 small ones per freight car. Crates average three trips before being discarded, an added feature of economy favoring the prize-winner.

Mr. Funke said that ease of inspection and testing the condenser unit in distribution warehouses is another outstanding factor favoring the crate. The unit can be tested simply by pulling the electric cord through any of the crate openings and plugging it into a convenient electrical outlet without even opening the container.



ALL STEEL CONSTRUCTION... AND STAINLESS, TOO!

This new Koch Refrigerator is made of stainless steel inside and out! It is fully insulated in every nook and corner. There are no wooden members to interrupt the solid blanket of heavy insulation. And for the first time in refrigeration history, such a refrigerator is welded solidly into one single unit! Capacity is 25-cu. ft. with 30-sq. ft. of usable shelf area. Shelves are adjustable. Lights are fully automatic.

Soon, this new model will be shipped to Koch distributors in every part of the world. In keeping with Koch traditions of quality, performance, and craftsmanship, every one will be a perfect refrigerator.





BIBLE BOOK Since 1883

Hore's your

PLENTY OF PROFITS IN CONFORT COOLING

No other phase of your business offers so large a potential market as the use of refrigeration apparatus for human comfort. Every business establishment and every residence having access to power at reasonable rates offers a sales possibility now or at some future date. Some of these prospects will require large "central station" systems for an entire building. Others will find it more practical to utilize smaller, self-contained equipment for handling a limited area.

The smallest practical piece of equipment for providing comfort cooling is the "window unit." Despite its diminutive size, it has proved its worth in thousands of offices, homes, apartments, and hotel rooms. A well-designed window unit performs all the major functions of summer air conditioning, including cooling, dehumidification, ventilation, cleaning, and circulation. As a rule the motor, compressor and condenser are outside the window, while the cooling coil, filters and fan are inside.

PERSONAL CONTACT VITAL

The aggressive dealer can earn attractive profits in this field if he recognizes that his selling must be accomplished by plenty of leg work, personal contact, and demonstration. In justice to his customer and the future of his own business, he must limit his sales to areas in which his unit will produce an acceptable degree of comfort. Over-selling should be avoided at all costs.

The introduction of Servel Supermetic into the comfort cooling field has contributed greatly to the acceptance of this type of equipment. For Servel Supermetic offers more capacity, with less bulk, less weight, less noise and vibration than was ever before thought possible. A window unit "Powered by Servel" is no toy, but a full-fledged cooling system with Installed view of a modern window unit by courtesy of Mitchell Manufacturing Company, 2525 Clybourn Avenue, Chicago, Illinois, which has earned an excellent reputation in this growing field. The Electric Refrigeration Division of Servel, Inc., manufactures for the air conditioning field power units and condensing units only. These are available through prominent manufacturers of store coolers and room coolers in all sections of the country.

bona fide capacity of one-half to three-quarters of a ton. If you haven't seen a really modern window unit, we suggest you look into its possibilities with manufacturers using Servel Supermetic power units.



Servel Supermetic "Power Units" are built in sizes from ½ ton to 5 ton rating and sold to reputable manufacturers from coast to coast. They are the heart of thousands of good air conditioners all over the world.



Sewel Inc.

ELECTRIC REFRIGERATION DIVISION. EVANSVILLE 20, INDIANA

This is Number Six in a series of advertisements featuring the markets available to the alert dealer in the commercial refrigeration industry. Ask for reprints for use in training your salesmen to take full advantage of all commercial refrigeration markets.

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With 'Hard-Hitting Sales' Dealer Can Meet Buyer's Market In Home Appliances

DAYTON, Ohio—Stressing "hard-hitting sales" as the most effective antidote for business failure in the appliance retailing field during competitive days ahead, H. M. Kelley, Frigidaire's appliance sales manager, introduced an 11-point "success" program to members of the Canadian Radio & Appliance Dealers' Association during the fourth annual convention in Toronto recently.

Warning that "in the tough, competitive days to come, many dealers will fall by the wayside because of lack of capital, lack of merchandising experience, poor store locations, poor service and lack of aggressiveness," Mr. Kelley urged hard-hitting sales programs to forestall business failure.

"Many new appliance dealers will weather the storm ahead," he declared, "but unfortunately a high percentage are probably in for a bad time. Best estimates indicate that there are possibly 50,000 dealers in the United States, alone—not to mention chain stores that have expressed their desire to enter this field."

Mr. Kelley stressed "customer good-will" as one of the most important objectives of the appliance retailing field.

"First, we must improve our 'salesability,'" he explained. "There exists today a tremendous opportunity for doing something that will pay big dividends in the months and years ahead. Good-will is still on the bargain counter. Today, you can

still obtain a dollar's worth of goodwill for a dime's worth of friendly effort—but this bargain will no longer exist when other retailers awaken from the sedative of the seller's market.

"We must remember that to 'sell John Smith what John Smith buys, we must see John Smith through John Smith's eyes,' he continued. "To the prospect, our products usually represent an important and major purchase—a purchase for which the housewife has been planning and saving for a long, long time. She has the right to expect that we will consider the transaction as important as she does.

Sales Mustn't Be Routine

"We should remember that while we may sell dozens of our products each month—we must not allow sales to become routine. The prospect may only buy one such product in a lifetime and the purchase is most important to her; consequently it should be of a major importance to the dealer.

"Second, the retailer should narrow the number of appliance lines he is selling. Obtain the best-known brand of each appliance available in the area and push it exclusively. The retail dealer should be in a position to enthusiastically tell his prospects that there is 'only one best brand'—the brand he is selling. If the dealer is unable to get the line he wants, he should improve his dealership until that line will want him."

Mr. Kelley described a third vital factor in the program as one of "specialization."

"If you are primarily an electric appliance dealer," he said, "go all electric. Don't try to carry water on both shoulders—by that I mean trying to be a small bottled gas utility and at the same time promoting electrical appliances."

He said that the fourth step in setting up a successful dealer program was one of "complete market coverage."

"The dealer must be sure that he is set up to cover all of his potential, including high income families, low income families, used appliance market, the farm market, inside selling and door-bell pushing. The dealer should also gear his sales program to product lines, affording each appliance adequate selling effort."

"The fifth essential is experience in the little-known science of successfully dealing in the replacement market," emphasized Mr. Kelley. "The profitable merchandising of trade-ins will become a 'must' in the not too distant future.

Dealer-Utility Cooperation

"Cooperation with electric utility companies in the promotion of the electrical appliance market is another important phase in the program. There are many ways that a dealer can help promote adequate wiring of new homes being built in his community."

Mr. Kelley also stressed improvement of retail store appearance; establishment of service and reconditioning departments to handle tradeins, and dealer participation in worth while civic and community events.

"There is another important point for the dealer to remember," added Mr. Kelley. "He should set up a plan of operation, which will function when price-cutting, chiseling and dumping arrive. If he will follow his charted course, he can steer his dealership safely through.

"Generally speaking," Mr. Kelley declared, "many sales organizations, after seven years of idle selling muscles, are finding they are pretty fat and flabby and relatively unprepared to move the tremendous volume of appliances and radios that are being produced today—to say nothing of greatly increased production that will come with the completion of manufacturing expansion programs, free supplies of raw materials, and increased manpower.

"As we analyze our fitness to tackle the tremendous job ahead, we must remember that manufacturing had no holiday—they learned new ways to greater production efficiency and in reconverting from war to peace, most plants had an opportunity to reorganize their facilities for improved efficiency over their prewar productivity.

"Compared to this bigger, stronger, more efficient manufacturing organi-

zation, we find the selling organization has actually deteriorated to where it can hardly be compared with the hard-hitting, go-getting selling machine it was seven long years ago—way back in 1940. Unfortunately the 'soft-selling' sellers' market has done little to improve the sales technique of the average salesman."

Mr. Kelley declared that the transition from a sellers' to a buyers' market was already underway. He pointed out that there is a wide variance in the degree of firmness of the market among the many different appliances being sold through retail outlets.

Refrigerators 'Drying Up'

"In the United States," he said,
"the mechanical refrigerator market
is fast-drying up for many brands—
particularly the new makes and the
lesser-known old brands. Some of
the top brands are available for
immediate delivery in some areas,
It can be safely predicted that refrigeration sales will be in a buyers'
market before the year ends.

"The electric range business is particularly good—where electric cooking rates and installation costs are reasonable," Mr. Kelley's talk continued.

\$25

am

"The electric water heater business also looks extremely good for a long time. Most utilities want this load and are rendering splendid and most helpful cooperation in building a demand for this appliance. It is predicted that the electric water heater will show the greatest percentage of increase of any prewar major electrical appliance.

"Our information indicates that the home freezer is already well into a buyers' market. In justifying our conservative appraisal of the home freezer market, it is our contention that its potentialities have been greatly over-estimated.

Freezer Market 'Oversold'

"In the urban market, the home freezer is being considered as a luxury item. Our experience is that a volume business cannot be built upon an appliance falling in this category. In the farm market where the purchase of the home freezer can be justified on economic and convenience grounds, the market appears to have been oversold as to the capacity needed.

"We believe that the food preservation requirements of the average farm home can be met most economically by installation of a medium sized home freezer, supplemented by locker plant service."

Mr. Kelley pointed out that opinions are wide and conflicting regarding the market for automatic washers.

"This market will probably remain unproven until some of the many contemplated new brands are available in volume. We believe that automatic washers will represent approximately 20% of total washer units sold in 1947 and about 35% of the total washer dollar volume. By 1950 we expect automatics to approach one sale for each conventional washer sale or 50% of all unit

IS375 Boll Bearing

15375 Boll Bearing

IS376

ENGINEERED

for LIFETIME

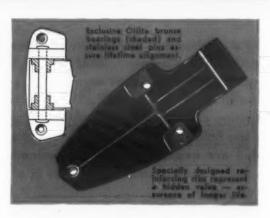
PERFORMANCE

IS331

IS329

INCHES

They're handsome . . . they're rugged, too . . . these hinges by Grand Rapids Brass. Each is designed and engineered for year after year of slam-bang commercial service. Note how special attention is given all points of major stress and abrasion . . how modern design and metallurgical science are combined to protect the good name of **your** product on which these hinges are installed. Write for full information on sizes, stops, and offsets.



by America's Quality Manufacturers of Commercial Refrigeration Hardware



Grand Rapids Brass Company
Makers of Dependable Refrigerator Hardware for over 40 Years

Grand Rapids 1, Michigan

DISTRIBUTORS WANTED!

If you can handle sales, installation, and service for Multiplex Fixtures for Bars and Taverns—here is your opportunity to cash in in a big way



by distributing

THE NEW
MULTIPLEX
BAR DISPENSER

Revolutionizing Tavern and Bar Service

IT ELIMINATES BOTTLES

✓ IT MANUFACTURES FRESH CARBONATED DRINKS (Seltzer, Cola, Lemon, Ginger Ale) AS EASY AS DRAWING A GLASS OF BEER

✓ IT SPEEDS SERVICE 100% AND INCREASES THE PROFITS OF BARS and TAVERNS TREMENDOUSLY.

WRITE US FOR FREE ILLUSTRATED BULLETIN

MULTIPLEX FAUCET COMPANY

MANUFACTURERS OF SOFT DRINK DISPENSERS.

4319-25 Duncan Ave. (Division 12) St. Louis, Mo.

Multiplex:—The Original Mixing Faucet, model of simplicity and durability for over 40 years.

Door Bell Ringing Appliance Salesmen Carry Movies Along To Demonstrate Their Wares

ST. LOUIS-One of the big problems of "outside selling" on the part of the electrical appliance dealer is being solved by The Appliance Arcade at Hampton Village Market here, through use of portable movie equipment carried by 10 outside men.

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The Appliance Arcade is the only electrical appliance store in the Hampton Shopping project which has been building in southwest St. Louis since shortly before the war. Van Vancil, head of The Appliance Arcade, earned himself a spot in the "plush" Hampton Village by expanding sales ideas a lot farther than the average dealer is ever required to do.

First, although the store is small, it will operate a crew of 10 outside salesmen, divided into two groups of five each, under a "district supervisor." The 10 men, many of them ex-servicemen, will be paid a flat \$25 per week salary, and a commission of 3% on every appliance soldwith earning opportunities almost unlimited, according to Mr. Vancil.

Backing them up, the store will offer a basement cooking school, featuring regularly scheduled classes, and seating 100, a direct mail list of 5,000, most of them previous friends of Mr. Vancil when a salesman at the Stix, Baer, Fuller department store here, and a newspaper advertising program budgeted at \$100 per

Every man will receive equal amounts of floor time, and the leads accumulating from store contacts, customers, direct mail and newspaper advertising, will likewise be

divided among the sales crew.

Most unusual idea which Mr. Vancil has developed for outside-thestore selling, is a complete miniature movie projection set, which every salesman will carry with him on calls.

"Outside salesmen have always been hampered on making home calls in that it was impossible to take the appliance along for demonstration," Mr. Vancil grinned, "and merely

SAVE YOUR TIME BUY BY MAIL

Pennsylvania dealer writes:

"I am very happy to recommend your company to others. All of my orders to you have received prompt and courteous attention.

"You have done your best in supplying us with scarce materials and

Air Conditioning and Refrigeration

Parts - Tools - Supplies Shop Equipment

Request Catalog on Your Letterhead

AIRO SURPLY CO.IIIC **SERVICE** 27,32 N. ASHLAND COVERS THE NATION CHICAGO 14, ILL.

is the System Wet? Don't guess—KNOW! MOISTURE INDICATOR tells instantly For Freon and Methyl Chloride. Accurate . . . fast . . . inexpensive See your jobber or write McIntire Connector Co. **6**

EXPERIENCED MEN CAN SERVE YOU BEST COMPLETE LINE OF REFRIGERATION SUPPLIES TOOLS AND ACCESSORIES

Newark 5, N. J.

EACH MONTH THIS FELLOW APPEARS IN THE LIQUID LINE
THE HIDUSTRY'S OLDEST HOUSE ORGAN
ARE YOU ON OUR MAILING LIST?

WEST COAST SUPPLY JOBBERS SINCE 1928

REFRIGERATION SERVICE INC. 3109 BEVERLY BLVD LOS ANGELES 4 CALIF

sitting down with the homeowner to exhibit catalogue cuts, and talk prices wasn't enough.

"Therefore, each one of our salesmen goes on every call equipped with a 15-pound kit, which includes a small movie projector, sound equipment, an $8\frac{1}{2}$ x 11 in. screen, and a stock of movie reels covering every appliance line we carry. Instead of merely talking, he can set up his movie equipment on a table, and show the customer forcefully why a specific appliance will benefit her."

W. E. Blankinship Promoted

CHICAGO—Carson, Pirie, Scott & Co. here has recently promoted Walter E. Blankinship to buyer of major appliances, according to L. M. Brock, divisional manager. Mr. Blankinship was formerly assistant

Storage, Office Building

CHARLOTTE, N. C.—Twin States Distributing Co. has recently announced that construction is about to begin on its new \$100,000 warehouse and office building, to be located at 515 W. Palmer St. here.

Owned by Harvey H. Stewart and Harold D. Albright, the distributorship covers both North and South Carolina from its headquarters here, handling refrigeration, appliances, and heating equipment.

Warehouse facilities and nine large offices will be provided for in the new structure, which is to be 75 by 125 ft. with underground, fireproof storage chambers, according to the company. It is expected that the building will be ready sometime in July.

Richards Manages Payne Firm

Shawnee, Okla.-New manager of the Payne Electrical Service Co. here is Vernon L. Richards, formerly with Firestone Tire & Rubber Co.

Distributor To Construct Dealer's Plan Gives Best Sellers Most Advertising

NEW ORLEANS-Home Specialties Co., new appliance dealership here owned by Milton Girard and A. W. Herrmann, has devised a unique but simple method to determine its advertising expenditure for each of the various appliances its handles.

Under the plan every time an appliance is sold, a fixed percentage of its list price is set aside for the company's future advertising of that particular item. Thus, if a refrigerator is sold, a portion of the sale price is earmarked for advertising of the refrigerator.

. This system, according to Mr. Milton, "guarantees that whichever appliances are selling best will receive the most advertising."

Schomber Back In Business

WHEELING, W. Va.-The Schomber Electric Co. of Warwood, here, has resumed business after an absence from the field of two years.

Film Exhibitors Discuss **Use of Appliance Gifts** To Ease Box Office Slump

HOLLYWOOD — Appliance dealers soon may be called upon by the nation's theater operators to help overcome the current box office slump.

Harold Heffernan, Hollywood cor-respondent for the North American Newspaper Alliance, reports that one of the stimulants being discussed by exhibitors is "tieups with local merchants whereby bicycles, radios, and household appliances will be given away from the stages to lucky ticket-holders." ·

"Unless movie-makers get back to creating acceptable celluloid entertainment, look for even your big first runs to be parceling off refrigerators, washing machines, phonograph outfits and bedroom suites, with an automobile give-away as the week-end climax," Mr. Heffernan said last week in his column which is also released by the N.A.N.A.

Frigidaire's continuing Market Research gets the facts that get the sales

Finding out what people want, then doing it, is an old Frigidaire custom. And Frigidaire's Marketing Research Department has proved a vital factor in this kind of sales management.

In the last year alone, more than 2000 personal dealer calls, thousands of answers to questionnaires from housewives, and extensive statistical research have given Frigidaire the factual answers to many current

sales problems concerning the new-building market, replacement business, rural electrification, and others.

This sort of operation helps make the Frigidaire franchise the most eagerly sought and jealously guarded in the industry. It is further proof, too, that you can-



Depend on FRIGIDAIRE to do things RIGHT!

These are the specialists who direct the many phases of Frigidaire's Marketing Research Dept. Here, at a general discussion, L. W. Smith, Mgr., (standing) emphasizes a point from a survey to E. G. South, Asst. Mgr.



BEFORE making improvements in convenience features, Frigidaire contacts hundreds of thousands of users. Miss M. J. Andrew talks with a Frigidaire owner to learn just what she thinks about Frigidaire and other products.

AFTER months of survey, user demands and ideas are tallied. From these user ideas come many important product improvements such as Frigidaire's new full-width Super-Freezer Chest, giving extra frozen food storage space.





BEFORE selling plans are developed, Frigidaire learns by interview what dealers' problems are and how they are handled. Thus, an overall operating and sales strategy is designed which is of most benefit to all dealers.

AFTER two years of personal calls, searching, "finding out," Frigidaire produced the famous Dealer Operating Guide, the most complete book of its kind ever produced. This is only one typical example of marketing research results.





BEFORE Frigidaire produces its selling aids, thousands of salesmen are interviewed and hundreds of presentations watched. In this way Frigidaire learns at first hand just what help is needed to make selling easier.

AFTER a nationwide survey and watching hundreds of demonstrations, Frigidaire produced, among other selling helps, the now-famous "Selling Station." It is a typical example of the results of thoroughgoing market research.





You're twice as sure with two great names

Frigidaire made only by General Motors



The Only COMPLETE REFERENCE on HOUSEHOLD REFRIGERATORS

Over 900 photographs—over 2900 detailed specifications and authoritative trade-in values given for all key refrigerator models manufac-tured since 1928.

Arranged and indexed for quick reference. All the appraisals shown are established by experts. Use the MANUAL to identify every refrigerator quickly and correctly.

Bookbound in durable green cloth.

Pocket size (4¾" × 6¾")

STANDARD REFRIGERATOR TRADE-IN MANUAL CO. NEW YORK 18, N.Y.copies of the TRADE-IN MANUAL at \$5.00 each.

NAME STREET ADDRESS....

> ...STATE... ZONE...

Send C.O.D. Check or Money Order Enclosed

'BROKERS' SUPPLY STEEL AT SKY-HIGH PRICES

Ideal Cooler Corp. 2953-55-57 Easton Ave. St. Louis, Mo.

May 5, 1947

I read your article on steel of March 31 with great interest and I got a genuine kick out of the answer of the steel people in your article, "more talk than steel."

To start with, the present steel distribution is definitely a reflection on big business. No sooner than the OPA or Government Regulations removed steel disappeared. were Instead of the regular method of warehouse distribution, brokers popped up all over the steel scenery.

All of a sudden steel disappeared from the regular channels but could be had in any quantity from the brokers for unheard of fancy prices, such as, from \$240 to \$300 a ton for cold-rolled steel.

It is almost a year and a half since we have been limping along with our production trying all kinds of maneuvers to keep our factory open, yet, there never was a time when I could not get all the steel I wanted if I would meet the price of these socalled brokers who were created just for this very purpose, to shake down the industry. From time to time our local market was offered anywhere from 3,000 to 4,000 tons for this unheard-of price.

Only recently I had occasion to advertise in the local daily paper, the St. Louis Post-Dispatch, for steel. Our telephone rang all day long with offers of galvanized steel anywhere from \$300 to \$350 a ton and coldrolled from \$260 to \$300 a ton.

If the steel mills are not guilty, where do these people, who never were in the steel business before, get their steel, offering anywhere from 3,000 to 5,000 tons, and, at the same time, the regular warehouse distributors get only a trickle.

The answer is obvious. It does not take a professor to figure it out. I was offered as much as 3,000 tons of steel at one time which, strange as it seems, the source of supply was Detroit. Another time, anywhere from one car to 100 cars, always at sky-high prices.

I am divulging no secret when I say this situation is universal and it is known to every manufacturer who buys steel and it is caused by one thing only. I repeat, steel is not being distributed by regular warehouses but by so-called brokers who, a few weeks ago, would not have recognized steel if it were shown to them.

You may use this article for what it is worth.

Louis Weiss, President

MORE WRITERS SHOULD HIT U.S. COMPLACENCY

1308 LaRee St. Jacksonville, Fla. May 9, 1947

Editor:

No words of mine can express my appreciation for the fine, hard hitting, frank series of articles you have recently written relative to the growing threat of communism.

In my opinion this is one of the finest pieces of "Wake Up America" material I have ever seen and you should most certainly be highly commended for contributing so forcefully to the fight against complacency, which certainly exists in our country today.

If more writers of your integrity and honesty would also sit down and write an article such as yours, perhaps a larger percentage of Americans would awake to the horrible fate which will surely be ours, if communism is not checked now.

I have shown your article to a number of friends and fellow workers and I am glad to say that all have wholeheartedly agreed, at least in principal, with everything you wrote. Many of them have wanted copies which they could hand out to other friends. One of our most prominent civic leaders is also very much interested in securing reprints.

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The thought occurred that perhaps reprints of this article would be available and if so I will be everlastingly grateful if you would send me 10 copies. I will gladly pay for the cost of these.

Thanks again for writing such an outstanding piece of "warning" literature and keep up the good work. The majority of us are with you 100%

FRED W. MARKLAND

Maytag Sales, Profits Up

NEWTON, Iowa-Maytag Co. here reports a net profit of \$1,141,353 or 55 cents per share for the first quarter of 1947. This is in contrast to a profit of \$399,068 or 9 cents per share for the corresponding quarter of 1946. Net sales for the first quarter were \$10,941,914 against \$4,694,104 for the same quarter, 1946.

It's Sensational_ The Entirely New MLAND HANDI-CUBE T Available in two new models —colorful plastic grids—or standard aluminum grids. Also plastic or metal tray lifters optional on either model. Sensationally new in every detail, the versatile Inland Handi-Cube Tray offers you a choice of grids-

either standard aluminum or lovely pastel-tinted plastic.

Certainly you'll want to see this attractive revolutionary ice tray which delivers ice cubes with unprecedented ease.

Just trip the lever and feel the rugged actuating mechanism respond with any quantity of ice cubes, instantly - each one full sized and dry. It's strong and husky for permanent ice releasing service.

A slight pull on the metal tray

lifter, as shown, loosens the tray

from the freezing compartment.

Graceful lines, sensational performance, and eye-catching beauty —all combine to speed the sale of this new, postwar Handi-Cube Tray.

For full particulars and prices write to-INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio



ALL NEEDED CONTROLS

FOUND IN THE CUTLER-HAMMER REFRIGERATION REPLACEMENT LINE

Sixty percent of all refrigeration control replacement requirements are met by one Cutler-Hammer control alone ... the Universal Replacement Unit. And where specific control is needed, that need is met by Exact Replacement control items in the C-H line, each individually packed, clearly labelled, complete with dial plate mounting screws, trim washers and full instructions for mounting and adjustment.

The practical advantages gained are: less capital tied up in stock; rapid and regular turnover; speedier completion of each job; greater all-round satisfaction. And in each C-H Replacement unit you will find the results of a 50-year specialization that had led to acknowledged leadership in the control field. Thus, outstanding refrigeration wholesalers recommend C-H Replacement Control and alert service organizations everywhere feature and use it. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin.

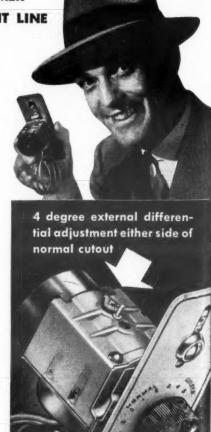
Bul. 9521N9 -> THIS ONE UNIVERSAL UNIT ALONE COVERS 60% OF ALL NEEDS ADJUSTABLE MOUNTING BRACKETS

Maximum Mounting Centers 4-3/16 Minimum Mounting Centers 2-3/16

Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.

Adjustable Range—Turning screw clockwise lowers setting and counter-dockwise raises set-

Operating knob can be adjusted to meet various evaporator scale settings. New knob



is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not required in unit.



DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL

INSIDE DOPE by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1) Ernie Tramposh's Refrigeration Equipment Co. ordered everybody to stand up and raise their arms skyward.

This bit of unexpected mass calisthenics reminded us of the two tramps in a box car on a hot summer day. Yawned one:

"Ho, hummm! Think I'll take off my shoes."

"If you do," warned the second tramp, "I'll raise my arms!"

Encouraging Sign

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1946.

That return to normalcy which we all have coveted for so long is more aware of competition.

To our amazement, twice in the last three weeks good advertisers have complained about statements made in the copy run in AIR CONDI-TIONING & REFRIGERATION NEWS by other advertisers. They insisted that their challenged competitors were

to us. Six months ago advertisers in the NEWS would have applauded a competitor who sought business, because they were chafing under the pressure of customers who were yelling for shipments which couldn't be delivered.

About this time last year, at a big industry conclave, a manufacturer of condensing units threw a cocktail party for his customers. He also sent invitations to all his competitors with this proviso: "You are invited to join this party if you promise to accept orders for 500 units from at least three of our guests."

Apparently the good old days of

-when one manufacturer gripes about a competitor's advertising. Three cheers!

Union Refuses Raise

Union plasterers in Port Huron, Mich., have passed up a 25-cent hourly raise.

They declared that their action was "our contribution to stabilizing building costs."

Officers of Local 10, Bricklayers, Masons and Plasterers (AFL), said the raise had been agreed upon recently in negotiations and would have become effective soon. The current pay rate is \$2 an hour.

Words Fail Us

granted in Baltimore. Having demonstrated a Bendix automatic washing machine in a new owner's home, the feminine field specialist said goodbye.

"I'll see you at the same time next Tuesday," smiled the housewife.

"What do you mean?" asked the specialist.

"Well, I understand I get a year's free service and I expect my washing done once a week-every Tuesday."

Face It, Friends

A Flash Cooler occupies a space not to

exceed 16" from ceiling. A complete unit,

it is quickly, easily installed by bolting the

General Sales Offices 2901 Lawrence Ave.,

convenient hangers to ceiling.

Not long ago, our U.S. Attorney General, Tom Clark, added his twobits worth to that of Max Eastman, a lifetime radical, and Herbert Hoover, a lifetime conservative, and to what is going on in this so-called "one world." They all agree that the world's "Communists are hell-bent toward world domination.

And that's something to think about-overtime!

Their idea of "one world" surely doesn't coincide with yours and

Ex-President Hoover, speaking in Rio De Janeiro, said of the Communists: "The universal party line of the Communists in every country is to . . . produce chaos where they can fish in troubled waters."

Soviet is out for conquest by world revolution through generating trouble and confusion wherever it can, quotes Stalin:

Max Eastman, warning that the

". . . I think the moment is not far off when a revolutionary crisis will

beginning of the end of world capitalism as a whole. It is essential that the American Communist Party should be capable of meeting that historical moment fully prepared.'

Now, says Thomas C. Clark, who is attorney general of the United States: "We know that there is a national and international conspiracy to divide our people, to discredit our institutions, and to bring about disrespect for our government. Why should we blind ourselves to obvious facts?

"When we see the same statements complete as to their ironical falsehood appearing upon the same day in revolutionary papers in London and New York, we cannot help but realize that here is a deep-seated and vicious plot to destroy our unity-



SOLD THROUGH LEADING

Chicago 25, Illinois, U.S.A.

REFRIGERATION SUPPLY WHOLESALERS

of AMERICA, Inc.

PEERL

signalled not only by unexpected politeness on the trains and in the hotels—and by undertakers going berserk at a convention-but by indications that manufacturers are once

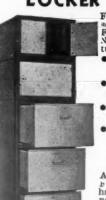
making unfair claims.

These peeves were a bit of a shock

unfettered competition are returning



INCREASE PROFITS with this LOCKER LINE



For more profits, sell A-S-E Froz-n-Food Lockers. Note these fea-

- Glide-easy drawer action Sturdy steel
- construction Rich two-tone finish
- Drawer units are shipped factory as-sembled

A-S-E Froz-nrood Lockers
have earned the
nation-wide preference of locker
users...they're
the attractive
lockers that mean
profits for you,
satisfaction for
your customers. your customers. Write today for additional infor-

ALL-STEEL EQUIPMENT, INC. 450 GRIFFITH AVENUE AURORA, ILL.

Certified = BY A QUARTER CENTURY OF REFRIGERATION KNOW-HOW

Plan your automatic refrigeration installations for a triple advantage: Proved performance, low first cost, low maintenance cost. LIPMAN machines for dependable service in any field of commercial references. commercial refrigeration are the result of more than a quarter century of manufacturing know-how. Let LIPMAN serve your needs profitably! GENERAL REFRIGERATION DIVISION





Night Club's Disappearing Ice Rink



When the skating act is over at this New Orleans night spot, the rink recedes under the bandstand, providing a dance floor for patrons.

Moving Rink Leaves Contractor Little Space To Fit In Refrigeration Unit

NEW ORLEANS—Patrons of a New Orleans' night club recently were startled to see an ice rink where they had just been dancing.

They were seeing for the first time one of the few retractable ice rinks in the country, spokesmen for the Refrigeration Equipment Manufacturers Association report.

Operating for two and three shows daily in the Blue Room of the Roosevelt hotel this disappearing ice rink was installed despite severe space limitations requiring a departure from previous engineering techniques. On the surface, the problem of installing a disappearing ice rink—one that would retract under the bandstand when not in use and roll onto the dance floor in a matter of a few minutes—seemed fairly simple. However, a survey of the space allotted for the bandstand and dance floor disclosed that there would be little room for plumbing and refrigeration equipment.

The stage was to be located against an outside wall of the hotel, and due to space limitations, the rink, when retracted, had to almost touch the back wall. Moreover, all available space on the sides of the stage was occupied by dressing rooms and service area.

The Equitable Equipment Co., New Orleans, solved the problem by designing a rink approximately 21 feet square with scalloped outside corners built to fit snugly around the building columns, when the rink is extended. Direct expansion coils are built into the rink itself.

Space limitations were overcome by maintaining a clearance of 12 in. between the back of the rink and the rear wall. Liquid and suction headers, expansion valves, and connections for flexible hoses were located in this limited space. The compressor and condenser were located in a basement equipment room, one floor below and 30 feet to one side. Flexible

metal inserted composition hose connections are used for the 30 feet of liquid and suction lines.

The bandstand is constructed of steel framing, completely spanning the rink. Clearance between the top of the rink and bottom of the steel framing was held to seven inches. Seven complete coil assemblies were constructed, each with its own expansion valves and distributors. Each coil consists of 20 lengths of tubing, on 134 in. centers, with lines terminating in headers constructed to allow each of the seven coils equal distribution of refrigerant.

The coils are set in a steel pan of heavy gauge steel with 4 in. of cork insulation, and lined with 24-gauge galvanized iron with soldered joints. Sand covers the coils and is saturated with water for freezing. When this base freezes the height of ice is easily built up to a 2-in. depth over the coils.

The pan is mounted on 44 ball bearing rollers, each 20 in. long, evenly spaced to spread the load and each equipped with an individual adjustment to correct for uneven spots in the dance floor.

The rink is operated by a cross shaft, with a drum and cable on each side, and driven by a 1-hp. backgeared motor, which gives an operating speed of approximately 22 ft. per minute.

Limit switches at each end of travel stop the rink at desired points. Control of the temperature for the skating rink is provided by a suction pressure control, designed to cut in at 21 pounds and cut out at 12 pounds.

Oregon Adds Name to State Contractor Groups In West

PORTLAND, Ore.—A new Refrigeration Contractors Association of Oregon has been formed and affiliated with the National Association of Refrigeration Contractors.

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Headquarters are in Portland, 424 Failing Bldg., and the entire state will be included in the area served by the organization.

James Freeman is president, C. J. Bell, vice president, and Ranson D. Meinke, paid secretary. On the board of directors, with the officers, are Anton Broms, E. B. Morris, and F. A. Rigby.

A big state-wide dinner meeting will be held in Portland June 12, to which all Oregon refrigeration contractors are invited.



WESTINGHOUSE WATER COOLERS . . . A BIG MARKET FOR YOU

Westinghouse now offers to its dealers, in one complete package, all the materials needed for a strong promotional activity:

- Selling Folders, "Where Can I Get a Drink of Water?". Excellent to use as a selfmailer for your direct-mail activities, or as a selling book to use when talking to the prospect.
- Complete Catalogs, containing a separate specification sheet for each Westinghouse Water Cooler, plus complete "Application Data" for each.
- A Promotion Guide. This is an eight-page handy selling help packed with marketing information, a complete display of promotional literature, suggested direct-mail letters, newspaper ads and product cuts.

Contact your local Westinghouse distributor for these new and exciting marketing helps, available now under one form number 7WC-2301 for your convenience in ordering.

THEN...sell this big moneysaving feature
 Standard One-Year Warranty on the Complete Water Cooler.

2. Additional 4 year FREE REPLACEMENT of the Hermetically-Sealed Mechanism. During these four years, if the Hermetically-Sealed Refrigeration Mechanism fails, Westinghouse replaces it at no cost to you. The Westinghouse design principle makes this possible.

For details about the availability of Water Coolers, write to Westinghouse. We will have the distributor in your territory call directly on you to present complete franchise information.

Westinghouse Water Coolers
WITH THE 5-YEAR PROTECTION PLAN

Plants in 25 Cities . . . Offices Everywhere



Bigger Wyoming Freezing Plant Maps 50% Output Boost In 1947 Du Pont-Stokes & Smith Device Forms, Fills, and Seals

COWLEY, Wyo .- The Big Horn Canning Co. here, which inaugurated frozen food processing during the 1946 canning season, is planning a 50% increase in freezer operations, according to Robert L. Peterson, vice president. About 2,200 acres of peas, beans, corn, et cetera, grown in northern Wyoming are to be processed during the 1947 season, he

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Last year the company put away in its new freezing plant 1,000,000 pounds of frozen vegetables, while this year the figure is expected to be 1,500,000 pounds. The company is Wyoming owned, with E. J. Goppert of Cody as president. Robert L. and Reynold H. Peterson, vice presidents, and Grant Taggart, Cody, secretary.

Quick freezing of vegetables is Wyoming's newest industry, and the freezing plant installed last year maintains a temperature of -40° F. The Wyoming men purchased the plant in 1945 from Marriner S. Eccles, chairman of the federal reserve board in Washington, D. C., and S. J. Quinney of Salt Lake City, with the idea of equipping it for frozen foods production. Facilities were enlarged, new machinery installed, and the new owners now have a plant which can turn out 1,500,000 pounds of frozen foods and 2,000,000 pounds of canned vegetables during the vegetable harvesting season.

Output will start late in June and continue until mid-October, giving employment to 100 workers. The plant freezes peas, beans, and corn. and the products are marketed under six brand names, several of which are nationally advertised. It is said to be one of the most modern freezer plants in the world. It takes four hours for a load of peas, for example, to make the trip from the viner to the freezer.

The viner is a machine which removes vines and pods, leaving the shelled peas ready for hauling from the fields to the plant. The peas are washed first in large, revolving drums, run through long troughs, then lifted by conveyors to huge vats of brine where they are separated by gravity. Heavier peas sink to the bottom and go off one way while the smaller or fancy peas float off in another direction. They are washed to remove the brine, and pass under the eye of workers who remove any foreign matter.

The peas next are blanched in steam for 55 seconds, cooled under more running water, and finally run into huge hoppers where they are fed through a measuring machine into cellophane-lined cartons. Additional machinery folds the cartons and slides them down to workers who feed them into still another machine which uses wax paper to seal the cartons air-tight.

Cartons then ride aluminum trays to the freezing room where they are kept for two hours at -40° F., after which they are ready for shipping. The plant has six freezing sections and each holds 1,350 cartons. On peak days the plant can turn out 50.000 12-ounce cartons of frozen vegetables in eight hours.

Warmly dressed workmen roll the frozen peas from the freezers to tables in the air conditioned processing room where they are packed into large shipping cases, each holding 96-dozen cartons. The cases are stored at 0° F. in the cold storage plant adjoining the freezers, preparatory to shipping in refrigerator cars. Biggest share of the output is shipped directly to Denver for distribution elsewhere.

Vegetable growers of the Shoshone Valley as well as the plant owners and workmen residing in Cowley have benefitted from the new frozen food industry. One farmer, for example, realized \$165 per acre for ◈ peas last year after paying for the seed, while pea silage used for dairying and cattle feeding operations more than pays the cost of harvest-

\$100,000 Canadian Quick-Freeze Plant To Process Vegetables

LETHBRIDGE, Alberta — A \$100,-000 quick-freeze plant has been completed recently in this Canadian

Initial operations will consist of processing large tonnages of peas, beans, and corn.



Yes . . . when you see the name DAVISON on the familiar blue label, you may be sure that you'll never find a more dependable desiccant. That's why DAVISON Refrigeration

Grade Silica Gel has been the standard drying agent for years with experienced

Ask your jobber for Davison Silica Gel in factory-charged dehydrators and for refilling.

LOOK FOR THE CAN WITH THE BLUE LABEL"

THE DAVISON CHEMICAL CORPORATION Progress through Chemistry BALTIMORE - 3, MD.

PIONEERS AND DEVELOPERS OF SILICA GEL

Canadian exclusive sales agents for DAVISON SILICA GEL: CANADIAN INDUSTRIES LIMITED, General Chemicals Division

New Packaging Machine

Cellophane Bag In One Operation

WILMINGTON, Del.-A machine, which, all in one operation, automatically forms cellophane bags, fills the bags with free flowing frozen products, exhausts most of the air from them, and heat seals the bags, has been developed by E. I. du Pont de Nemours & Co. and the Stokes & Smith Co. of Philadelphia.

The machine is an adaptation of the Stokes & Smith standard automatic model BB "Transwrap" machine. The adaptation allows it to make packages for greater weight and bulk than the peanuts and candy for which it was originally designed, it was said.

Du Pont research is said to have provided the proper type of cellophane essential to the successful operation of the frozen food wrapping process.

Only one operator is needed to run the new "Transwrap," which can produce 40 bags per minute, according to du Pont officials. Hands do not touch the food at any step, they

Free flowing vegetables such as lima beans, diced carrots, peas, combinations of carrots and peas, cut corn, succotash, and mixed products can be packaged by the machine, they asserted.

These may be frozen first and then packaged, or wrapped fresh and then frozen within their cellophane bags, they pointed out.

Each "Transwrap" unit includes

two fully automatic production lines, synchronized and turning out two finished bags at one time, du Pont officials declared.

Its operation was described as fol-

Cellophane is provided from standard rolls of stock size. An electric eye attachment permits the use of printed cellophane. If plain film is used, brand labels may be affixed

The rolls are mounted one on each side of the machine to feed each of the two packaging lines where a single wall bag is used. When a double wall package is desired, two are mounted on each side.

Vegetables are fed into hoppers at the top of the machine. Each side is provided with its own set of adjustable measuring cups mounted in a rotating filler head.

On each side, one cup at a time is passed over the tubes through which the vegetable is discharged into the cellophane bags.

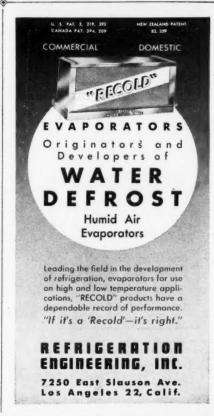
As a draw bar pulls down the cellophane tube, the meshed dies make a single seal closing the top of one bag and the bottom of its fol-

Accurately measured portions of the vegetable, 12 oz. in the conventional package, pour into the bag as the bar progresses in its stroke to the bottom of its cycle.

At the lower limit of each stroke a final operation shears the trans-

verse seal at its center, freeing the filled bag from the line. As the finished bag drops from the delivery end of the line, the draw bar travels upward again to repeat the cycle, and the package is ejected through a chute to a conveyor.

An outstanding advantage of the new process is adaptability to a wide variety of package types, du Pont officials declared. Double wall or laminated bags, they pointed out, are suitable for the retail trade as finished units without further wrapping.





Engineered and designed for the exacting job of low temperature food freezing, the BTC Food Freezers embody all recommended performance standards for home and farm food freezers.

BTC Food Freezers are made by The Brewer-Titchener Corporation, specialists in metal fabrication for over 100 years and manufacturer of the famous BTC **Evaporator Plates.**

The BTC Food Freezer line includes four sizes: 10, 12½, 18 and 23 cubic feet, in dimensions of 74", 76", 981/2" and 121" long by 28" wide by 3334" high; will go through standard doorways easily; and with 1/3 hp., 110-120 V. and 1/2-hp., 220 V. motors.

A limited number of dealer and distributor franchises are available. Write for complete bulletin.

THE BREWER-TITCHENER CORPORATION Crandal-Stone Division-Binghamton, N. Y.

They'll Do It Every Time By Jimmy Hatlo



Out With Special Privileges - - Revise the Wagner Act!





the new GREAT NAME in Home Freezers FIRST NATIONAL BANK BUILDING, CHICAGO 3, ILLINOIS AN INTERNATIONAL INSTITUTION . SUBSCRIBERS ALL OVER THE WORLD

Trade Mark AIR CONDITIONING AND registered U. S. Patent REFRIGERATION Est. 1926

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F. M. COCKRELL, Founder

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How About the Investor? Is He the Forgotten Man of This Era?

URING all of our nation's to-and-fro disputes over the Labor versus Management problem, most of us argufiers have overlooked the rights of one of the most important units of business enterprise.

We have forgotten that the investor has certain inalienable rights, too.

"Ownership"—when it is personified—has been pushed back into the role of the "Forgotten Man." The investor-such as the owner of rental real estate—has been given a raw deal. Nobody loves the propertied individual in this Screwy Age. This goes especially for the politicians!

And the manager of property has become a pariah, too, it would seem.

Management and Ownership are not necessarily synonymous, however, as too many voters erroneously believe. Actually, the term "management" may apply only to the men who really operate a business enterprise and who, quite possibly, may own only an infinitesimal part of it.

The owner has invested his savings, whether they be large or small, in a specific enterprise, and so he has a stake in its success, too. He hopes, of course, that this enterprise will succeed to the extent that he will receive a reasonable return on his investment.

But, during the last decade and a half, he has found out that his fellowmen are against him. Some people will hate him if he receives dividend checks. They'll call him an "absentee owner," or a "parasite."

Hundreds of thousands of corporation employes are part owners of these various types of businesses-in which they also

They, and their dependents, must gain sufficient earnings from these respective enterprises to guarantee them a living wage —both from their salary payments and from their dividends.

It is the intrepid owners of these small shares of stock in our country's major industries that most of the "social thinkers" have ignored.

We all concede that the laborer is entitled to a generous return for his work. That is only fair. But when he asks for a greater share than he rightfully earns, that exorbitant sum must come from someone else's pocket.

As matters stand today, the people who are robbed are the "little people"—widows, orphans, obscure employes, investment trusts—those who can't protect themselves against the encroachment of alien philosophies.

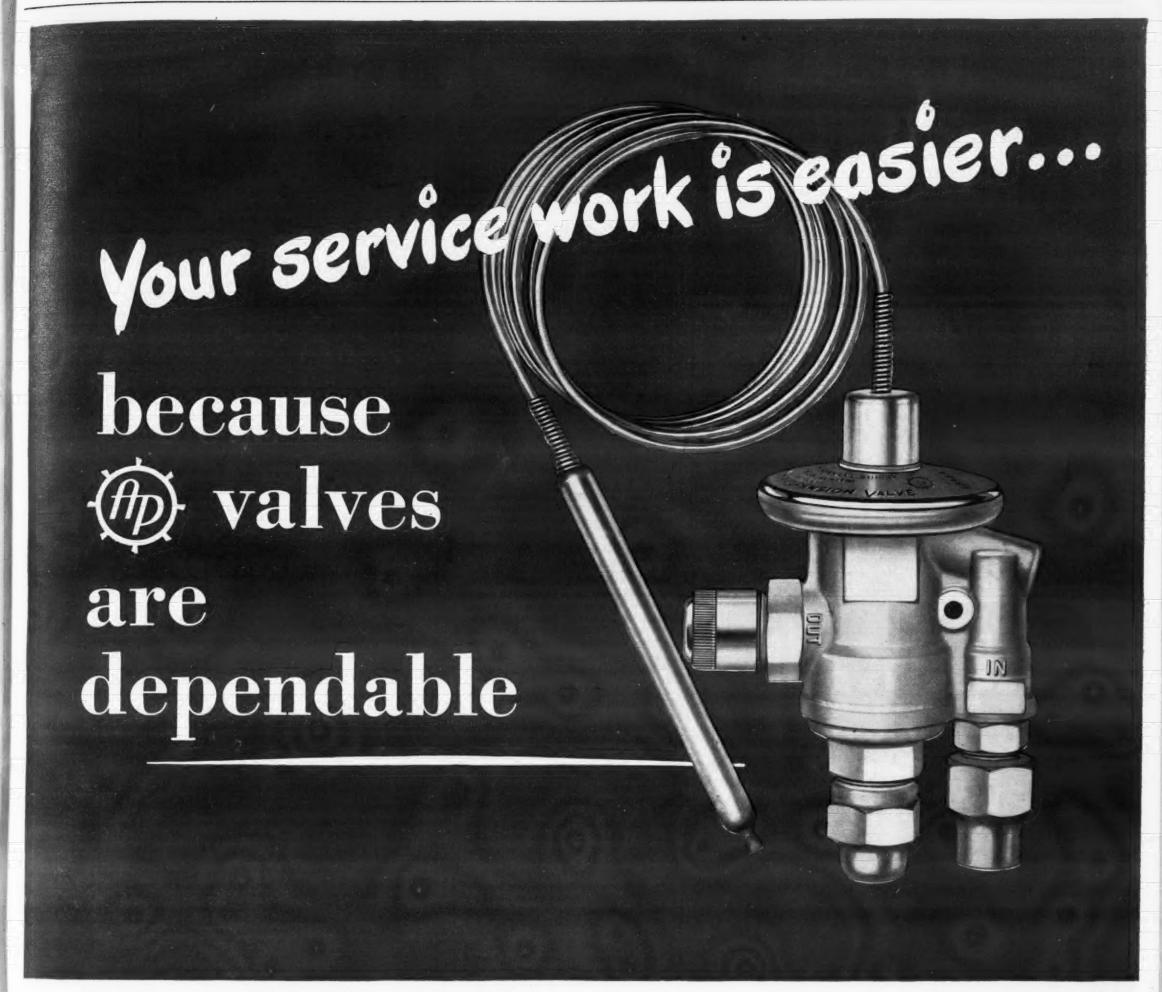
Thus the balance is upset, and the net result of these bargaining shindigs turns out to be a case of "robbing Peter to pay Paul."

The only solution to this obviously unfair dilemma is to establish a system of fair play for both owners and workers-a system based upon individual wage-scale earnings via the piecework formula.

Russia has instituted the piece-work system for her workmen —and Russia purports to give the "Little Fellow" his just desserts. Ergo, why don't we in America follow suit?

Only by glorifying this Great Idea—and by explaining how and why it can benefit each participant—can we all hope to attain the mighty prosperity we deserve and which is our heritage.

When workmen get paid more for doing more work, business enterprises will show bigger profits. Thus the investors-large and small—should get better dividends. That will encourage them to invest more money to create more jobs and to pay higher wages, to the eventual benefit of all.



THIS MODEL 205-C Thermostatic Expansion Valve

WITH NEW .160" ORIFICE HANDLES UP TO ... 2½ TONS FREON OR 5 TONS METHYL OR SULPHUR

A-P Model 205-C offers a surprisingly wide range of capacity for a valve of its small body size. It has the compactness of a 1-ton valve, yet it effectively and dependably handles systems up to 2½ tons Freon — an advantage in space-saving and easy installation that service engineers have been quick to appreciate.

Like all A-P Valves, Model 205-C, with its liquid charged power element, can be used over the entire suction temperature range of -40° to ordinary air conditioning temperatures without adjust-

ment. It may be mounted in any position, or placed in an ambient temperature higher or lower than the bulb temperature without effecting its accurate and dependable control efficiency. It gains control quickly, and maintains a constant superheat, staying close to its superheat setting regardless of load variation.

Add the new A-P Model 205-C Thermostatic Expansion Valve, .160" orifice size, to your service kit. Get it from your refrigeration supply jobber, or write for new bulletin E-110.



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AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET • MILWAUKEE 10, WISCONSIN Export Department — 13 East 40th Street, New York 16, N.Y.

DEPENDABLE Refrigerant Valves

Accurate Records & Bookkeeping Important In Operations of West Coast Contractor

Editor's Note: This is the second of two instalments giving a detailed account of the operations of Neel's Refrigeration Co. in Long Beach, Calif., specializing in commercial refrigeration sales and service. The firm is operated by three partners—H. Neel, H. L. Graham, and R. R. Richards.

Featured in this instalment are the methods employed for keeping accurate records of costs, billing customers, and the bookkeeping setup which permits a quick analysis of the firm's operations to be made.

By C. Dale Mericle

To keep track of all the equipment and parts on inventory two systems are used by Neel's Refrigeration Co. Inventory on big equipment is maintained in the office, while the stock room maintains a separate inventory on repair and replacement parts. At present the stock room is setting up a Cardex perpetual inventory system for these items, under the direction of "Tex" Graham, head of purchasing.

ing.
"You don't have to be crazy to handle this end of the business, but it helps," says "Tex."

Thus far Neel's has acquired three Cardex files, each of which holds 15 drawers, and each drawer holds approximately 70 cards. This totals 3,150 cards for listing inventory on as many individual parts, fittings, etc.

Front of the card shows the unit price, description of the piece, amount received, sold, and the balance on hand at any time. Also on the front is a sliding tab over a row of numbers running from 1 to 24. When a stock man takes a piece of equipment out of stock he is supposed to slide the tab down one notch. This shows how many are left in stock.

Back of the card lists order data (vendor's name, order date, quantity, list price, discount, freight, and delivered cost), shipping date, receiving date, and in addition, provides space for monthly consumption records over a period of four years.

In handling any installation job, material requisitions are supposed to come from the engineer to the stock room, sales department, service department, and Mr. Neel. These requisitions describe the equipment, listing unit, coil, miscellaneous parts (including sizes), and provide layout instructions and space for special instructions which may be added by Mr. Graham or Mr. Bartlett, the service manager.

When completely filled out, the material requisition sheet goes out with the men who are to install the job.

To obtain parts from the stock room for service calls or shop repairs, material requisitions are sent to the stock room. In the evening the night service man enters these parts which have been taken out of stock during the day on the stock room journal and also on the job work card. (The work card will be described later when the bookkeeping procedure is outlined.) This lists the items and their prices.

New condensing units which come into the stock room for eventual use on remote jobs or for replacement in self-contained fixtures get an aluminum tag which shows the card number of the standard Frigidaire warranty card. When the unit is shipped out, the office fills in the customer data and beginning date of the warranty period. Then the card goes to the service manager who keeps it on file.

For reconditioned condensing units a warranty card filled out in red ink is employed, and the unit number is *painted* on the unit, rather than tagged.

All units and motors are numbered in numerical (and thus chronological) order as received. New unit numbers carry the prefix "N"; rebuilt units, "A"; motors, "B."

"At the present time," says Mr. Graham, "we don't differentiate in our numbering system between new and rebuilt motors, 'cause today motors are motors, regardless of whether they're new or reconditioned."

If a motor is placed on a condensing unit which had been received by Neel's without a motor, the motor number is also placed on the unit warranty card, and the motor inventory card is clipped to the unit card.

This recording of parts, condensing units, and motors is just one aspect, 'though an important one, of the company's overall bookkeeping system, which has been instituted by Clyde Kernohan, the accountant.

"My entire object in the type of bookkeeping we have is to show at the end of the month the department profit and loss statement as well as the overall company picture," he explains.

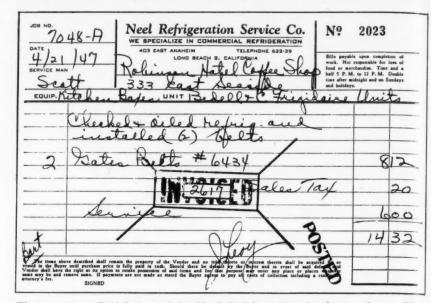
His method, he says, eliminates considerable cost-accounting, and within one day at the close of the month's business, the company knows exactly where it stands financially. Any weak spots can be discovered immediately and corrected.

The firm's bookkeeping procedure can best be outlined by tracing the "paper work" involved in both a service call and the sale of new or replacement equipment. First, a service call.

In all instances, if possible, the original service call is first routed directly to Mr. Bartlett, the service manager, who can analyze the complaint in most cases as he talks with the customer over the 'phone.

The service call is then recorded in triplicate in a call book, which are numbered in chronological sequence. The calls, incidentally, are

Record of Service Call Starts with This Ticket



The service call ticket used by Neel Refrigeration is shown above. This particular one has already been posted and invoiced.

answered in order of their apparent importance and emergency.

The call ticket will be filled out with an analysis of the job and customer data and be assigned a job number. The original ticket is taken by the serviceman on the job and on it he lists the parts and prices plus the labor charge at \$3 an hour. If more than one service call is required

on a particular job, separate call tickets are written up for each call.

If parts of the job being serviced should require repairs to be made in the shop, these parts are brought in by the serviceman, tagged with the job number as shown on the service ticket, and given personally to the service manager

(Continued on next page)

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Distributor appointments now being made on AIR-KING, wonderful new refrigerator deodorizer which acts on a new principle. More than an adsorbent, AIR-KING contains active chemicals which destroy troublesome refrigerator odors. Protects ice cubes, milk and butter against odor-taint from fruits, cantaloupes, cheese, garlic, onions and offensive odors.

BIG MARKET—Recent survey shows 25% of all refrigerator and ice box owners use deodorizers. Easy to sell AIR-KING because of its low price, small size and active chemicals. Now setting sales records in leading stores in California. Big profits for distributors and dealers as it goes national. Backed by extensive publicity and advertising.

MAKE THE "ONION TEST"—put a chopped onion in your refrigerator overnight. Next morning, taste your ice cubes, butter, or milk.

They'll be odor-free. Make this test. Have

sample dozen. Write or wire today.

Shelf hooks furnished with white plastic

your employees test it, too. Order a

Shelf hooks furnished with white plastic case. Takes little space. Measures only $3 \frac{1}{4}$ " x $4 \frac{1}{2}$ " x 1". Allows free circulation of air.

FEATURES:

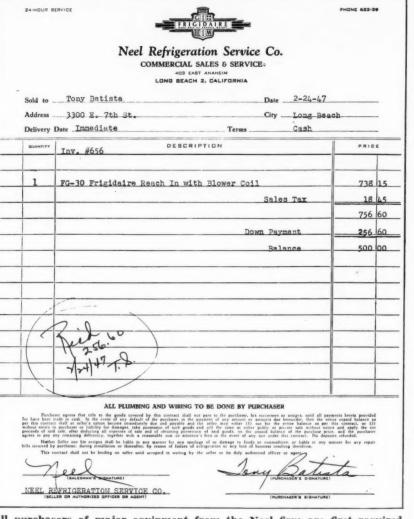
LOW PRICE—lists for \$1.50 yet does a better job than others selling for 3-times more.

SAFE—Harmless chemicals kept spill-proof in white cloth bag. CONSTANTLY ACTIVE—No baking, airing, sun-drying or other rejuvenation required.

1-YEAR GUARANTEE—Gives protection long past 1-year guarantee. SOLD BY JOBBERS ONLY—Write for discounts and recommended dealer prices. Dealers please specify your jobber's name on initial orders.

Made and guaranteed by Hanson-Loran Chemical. Address all inquiries to:

INTER-COASTAL COMPANY, INC.
649 SO. OLIVE STREET . LOS ANGELES 14, CALIF.

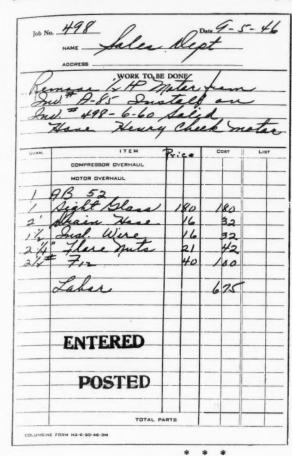


All purchasers of major equipment from the Neel firm are first required to sign this itemized field purchase order.



NIAGARA BLOWER COMPANY, 405 LEXINGTON AVE., NEW YORK 17, N. Y. Field Engineering Offices in Principal Cities.... "Over 30 Years of Service in Industrial Air Engineering"

Job Card Tallies Time & Material on Shop Repairs



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MTR. REPAIR				
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Close Control of Costs Permits Quick, Accurate Analysis of Firm's Finances

(Continued from preceding page)

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This is done to insure the job's being routed through the shop in the correct manner, and often the serviceman may have a tip on what repairs are likely to be needed which he can pass on to the shop foreman.

The service manager then fills out a shop job card. On the front of this 5 by 8 in. card is space for the original job number, name of customer or department for which work is to be done, description of the work to be done, and the itemized list of parts used.

On the back of the job card is space for recording the time involved and any comments which the shop man may care to make.

This card is given to the man assigned to the job by the shop foreman, and on it he records the parts used and his own time, and when the job is completed, the card is returned to the service manager for pricing. Here he records both list and cost prices and figures up the labor charge.

If this is to be a direct customer charge, the service manager fills out an itemized customer service call charge sheet in triplicate.

Where the job is being handled on a flat-rate basis, such as for overhauling a condensing unit, the service manager does not itemize the charges on the customer charge sheet. One copy stays in the book, the original goes to the office for final billing, and the duplicate will go to the customer when the serviceman delivers and installs the equipment.

While a job is still in process all tickets involved are kept on file in the service manager's work-in-process file. When the job is finally completed the service manager pulls all these tickets.

On his last call the serviceman takes all the original customer call tickets out and the customer either signs the originals (which are returned to the office for invoicing) or pays cash.

If an invoice is required, the front office will invoice the entire job on one master invoice, which is mailed to the customer. Standard credit terms are net 10 days.

On the major equipment sales the procedure is as follows:

The customer is required to sign an itemized customer field purchase order which lists the equipment ordered, price, and terms. For accounting purposes all of these orders are run into the company's accounts receivable ledger whether they are

cash transactions or time payment.
"Reason for this," explains Mr.
Kernohan, "is to establish the customer's account in the books with his credit rating at the very first contact. Having this credit information on the ledger sheet is the handiest

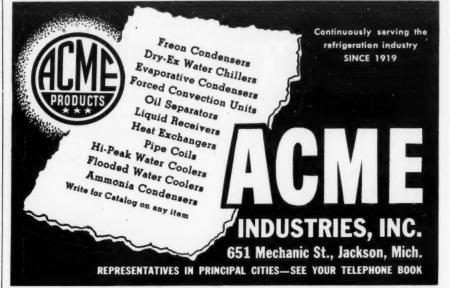
Sales department merchandise, as (Concluded on next page)

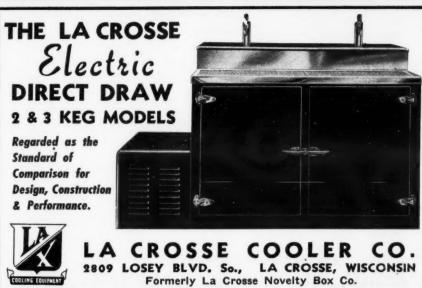
Both sides of a typical shop job card as used by Neel's in Long Beach, are shown above. It carries an itemized account of the materials employed and time involved.

The Cool Master

An efficient, cooling unit for walk-

in refrigerators and other space



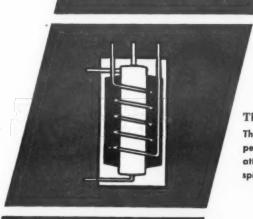


The Curvette
A new cooling unit of compact, distinctive design, for reach-in refrigerators, cabinets and counters.



Radial Cooling Units

The original radial cooling unit
for walk-in refrigerators.



Thermobank Automatic Defrosting The only completely automatic low temperature defrosting system requiring no attention, no water sprays, no brine sprays and no electric heaters.



The Panel Unit Cooler

A highly efficient, compact, convection cooling unit for reach-in refrigerators—made in a complete line of sizes and capacities.

count upon KRAMER for ADVANCED ENGINEERING Our business is that of manufacturing heat exchange equipment for the refrigeration industry. Our aim is to contribute to the advancement of the art. It is with some satisfaction that we review our latest achievements, including: the creation of a complete line of forced convection cooling units; the development of low temperature de-frosting equipment

> *IT'S THE COILS THAT COUNT"

for all equipment.

culminating in the inven-

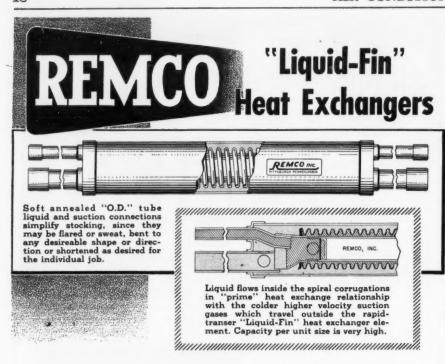
tion of the Thermobank;

and the maintenance of accurate capacity ratings

KRAMER TRENTON CO.

TRENTON 5, NEW JERSEY





The industry now has sufficient test data and actual field experience on suction-liquid line heat exchangers to fully appreciate the substantial increase in system capacity and vast improvement in lowside and refrigerant control performance to be gained by their use. They now are accepted as standard components to be included in every new and existing commercial job. Keep in mind, the lower the lowside temperature, the greater the need for, and advantage of, a heat exchanger.

Straight through design of liquid and suction connections, plus 125% minimum flow areas, definitely precludes the possibility of pressure drop in either the liquid or suction circuit, even under maximum operating conditions.

Because the suction gas is on the outside, REMCO "Liquid-Fin" Heat Exchangers may be installed inside or outside of the refrigerated space.

REMCO, INC. 49th Street & A.V.R.R. Pittsburgh 1, Pa.

System of Records Has Important Role In West Coast Firm

(Concluded from preceding page)
the term is used by Neel's, includes
all refrigerated fixtures.

Upon receiving shipments of refrigerated fixtures, either remote or sef-contained, a perpetual inventory tag is immediately attached to the fixture. The half of the tag which stays wired to the equipment lists the equipment model number, type of condensing unit, and price. The same data is on the other half of the card, in addition to motor, coil, belt, and refrigerant data.

In the case of self-contained fixtures, the shop checks the equipment, fills out the card, and installs a dehydrator and motor overload protector.

The half of the card detailing the above-mentioned information is torn off and sent to the front office where a permanent file on this piece of equipment is set up on a 5 by 8 in. card. Information is transferred from the tag to this card, which also carries notations of all work done on the equipment at any time during the warranty period.

Meanwhile the customer's original purchase order is logged in the back-order file until the equipment comes in and is ready for delivery.

When ready for delivery, the original order is turned into the office for billing, carrying the oiginal inventory number of the equipment as

Equipment Tag Aids Inventory Files

656 ?.L	Equip.	FG-30 Frig R.I. 656
9. K	Unit	Frig 1/4 1/5/200
t vie	Motor	Delco Y4 1 ph. 60 cy
70 /	Coil	
200	Belt	5441640
7	Gas	FREON
Equip. Unit		

When new fixtures come into Neel's Refrigeration in Long Beach, this permanent inventory tag is immediately attached to the equipment. After the shop has filled out the data on model number, unit, motor, etc., half of the card is torn off and sent to the front office where the data is transferred to the permanent file card (shown below).

set up on the permanent inventory card. This card is pulled from the on-hand inventory file (where it remains in file in numerical order as long as the equipment is in stock).

Name of the purchaser and his address as shown on the customer purchase order is transferred to the top of the inventory card for that piece of equipment, and the card is filed, being cross-indexed in a telephone number file listing both the customer's name and his business name (such as "Joe's Grill"). The card itself is filed under the customer's business name.

In outlining the bookkeeping procedure, Mr. Kernohan points out that any time expended in the shop, except for maintenance of the shop equipment, is recorded on a job, and instead of being charged directly to the customer (on the books) is charged against the department for which the work was done—office, sales, service department.

The shop is allowed credit for all labor at the retail price of \$3 an hour and cost plus 10% on parts in interdepartmental work. Job cards on this interdepartmental work, incidentally, don't carry a job number except when working on equipment

for the sales department.

These interdepartmental work cards go to the office for recording on the books. The shop gets credit while the various other departments are debited.

All production activity is journalized in the production journal. All cash items and general items are journalized, too. Both these sets of figures are transferred from the journals to the general ledger, which shows the overall assets and liabilities in the forward section. In the back section of the general ledger income and expenses are broken down under the headings, "general," "equipment sales," "service," and "shop."

By noon of any day, all transactions of the previous day have been journalized, and in one day's time at the end of the month, Mr. Kernohan gets out the monthly statement on each department and the whole firm. He usually waits until the 10th of the month to get a truer picture on billings and receipts.

Thus, any downward trend in income, or upward curve in expenses is noticed as soon as it occurs, permitting immediate analysis and correction

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Permanent Records Are Kept on Equipment

EQUIP. SERIAL	2-24-47	Drop Shipment	405.79	PRICE
COIL MAKE	2-24-47	Rischard 5% Sold by House	36.91	738.15
COIL SERIAL				1,30.43
LINIT MAKE				
Frig. 1/4 Unit Part No.			-	
LOG. 17KA597				
17XA597		*-		
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A 3170 115/230 V				
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GAB				
Freen				
2-24-47				

Data from the equipment tag (shown at top of page) is transferred to this card, along with the name of the purchaser of the equipment. All transactions and service calls on this piece of equipment will be recorded on the card as they occur.





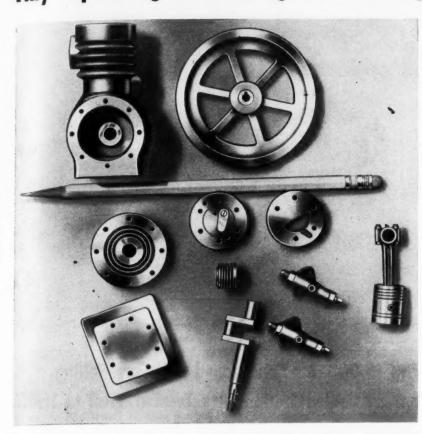


AIRSERCO MANUFACTURING CO., INC.

435 MELWOOD ST., PITTSBURGH 13, PA.

EXPORT OFFICE: Melchior, Armstrong, Dessau Co., Ridgefield, N. J.
BRANCH OFFICES: Boston, New York, St. Louis, Cleveland, Knoxville, Minneapolis, Les Angeles

Tiny Operating Condensing Unit Developed by Weber Engineer



Precision model building is always a difficult job, but a working model of refrigeration condensing units should be just about tops in exacting design and machining. Size of some of the compressor parts in the model built by W. A. Pruett, who heads the refrigeration research department at Weber Showcase & Fixture Co., Los Angeles, are obviously minute as compared with the pencil in the photograph. Bore of the cylinder, for example, is but 5% in. The operating model was displayed for the first time in several years at the recent Western Refrigeration Industry Exposition in Long Beach, Calif.

LOS ANGELES - W. A. Pruett, who has been in charge of the Refrigeration Research Department of the Weber Showcase & Fixture Co., Inc., for nearly a quarter of a century is a model enthusiast, and a major achievement is one of the smallest working refrigeration condensing units ever developed.

All parts of the unit were actually worked out and manufactured by Mr. Pruett himself, and the compressor, which is an actual working model of many large compressor units used in Weber equipment, is only 3% in. high and 5% in. in length overall at base. The unit has a speed of 400 r.p.m. The bore is 5% in. and the stroke is also \% in.

The machine is driven by a ½0-hp. Bodine motor. Piston displacement is .191 cu. in.; B.t.u. rating, 110 B.t.u. per hour, at 24 pounds suction pressure and 105 pounds head pressure. The crankshaft bearings are ¼ in. in diameter, with sylphon seal on

It has hollow wrist pins 1/8 in. in diameter, $\%_{16}$ in. long. The fly wheel diameter is $3\frac{1}{4}$ in. A "Trapit" filter is used on the liquid line. Bronze bearings are used throughout, including wrist pin bearings. Close grained wear-resisting Meehanite metal castings were used for cylinder and

"Freon" is used as the refrigerant. The compressor has a splash oiling

This small compressor has been for the frosting of a sign. The actual sign is constructed of Revere copper tubing, which is .040 inside dia. and .075 outside dia., and frosts up to the size of a lead pencil.

OPPORTUNITY !!!

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A SUPERBLY ENGINEERED AND WELL CONSTRUCTED 6 CU. FT. HOME FREEZER-WITH AN UNMATCHED PERFORMANCE RECORD. MANY THOUSANDS IN USE. TRADING AREAS OF BOSTON, PROVIDENCE, BALTIMORE, PHILADELPHIA, HARRISBURG, WASHING-TON, WILMINGTON, PITTSBURGH, INDIANAPOLIS, LOUISVILLE, ST. LOUIS, KANSAS CITY, MILWAUKEE, AND MINNEAPOLIS.

WE ARE EXPANDING OUR SALES OUTLETS, SO

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REVCO, INC., DEERFIELD, MICH.



GET THIS NEWEST SPRING CATALOG NO. 143

Send for YOUR COPY of the New Spring DEPENDABOOK today! Use YOUR letterhead please.

THE HARRY ALTER CO., INC.

SO. MICHIGAN AVENUE CHICAGO 16, ILL.

134 LAFAYETTE STREET NEW YORK 13, N. Y.

3 New Patents on Food Dehydration Are Issued to Clarence Birdseye

GLOUCESTER, Mass.-Three patents, covering new processes of food dehydration and preservation and the attendant dehydration apparatus, have been issued to Clarence Birdseye, noted frozen foods inventor, and assigned to Dehydration, Inc.

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The patents and their titles are: 2,419,875—Dehydrating Food by Radiant Energy and Gas; 2,419,876-Dehydration Apparatus having Conveyors, Agitators, Radiant Heaters, and Gas Circulating Means; and 2,419,877—Process of Improving and Preserving Food Products.

The process of improving and preserving moisture containing food products, as described by the U.S. Patent Office, includes the steps of first dehydrating the product to remove a substantial fraction of its original moisture content, then immersing the partially dehydrated product in a liquid refrigerant containing a flavoring ingredient, thereby freezing the product with an accretion of moisture content and flavoring ingredient and in substantially the natural shape of the original fresh

This process, it is claimed, over-

comes such disadvantages as breakdown and denaturing of fruit tissues, loss of flavor and juices, and the alleged unsatisfactory results gained by slicing and sugaring berries before packaging.

In the dehydration process, the food is passed downward by means of conveyor belts through a series of closed compartments that together make up the patented dehydration apparatus.

As the food moves along, it passes through zones of convective and infrared radiation where part of the original moisture content is removed. The partially dehydrated food is then heated internally by means of passing it through high frequency electric

At the same time as the food moves downward, a current of dehydrating gas moves upward through the compartments. This gas passes across the food in the same direction as the food is moving.

It acts to remove additional moisture and to advance the lighter and drier food units through the electric fields at a faster rate than the heavier units.

Easily demonstrated advantages

of FIBERGLAS insulation

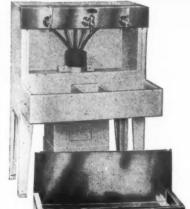


No question about it, you have a real sales advantage when your products are insulated with Fiberglas*-be they home freezers, commercial cabinets, or smart newfrozen-food shopping bags as shown above.

Long the first-choice insulation in ranges, refrigerators, water heaters, commercial cabinets and coolers, Fiberglas is also used today in blankets, hunting jackets, numerous other "consumer" items. Never before has an insulation material been so well, nor so favorably. known to the buying public.

This is something to remember—and to act on this next year. Use Fiberglas in your selling as well as your products. Put a "Fiberglas-insulated" seal on your equipment...or mention "Fiberglas" by name in your own tags and literature. Mention it also in your advertising. Tell and sell with Fiberglas!

THERMAL INSULATION



Streamliner

TAPPING CABINETS

Refrigerated Line & Air Cooled Models

For Complete Line write for Bulletin

36

FIT UNDER THE BAR Not Necessary to Cut Away Top!

Newly developed removable drip pan, which allows access to inside of cabinet, eliminates need for usual top drain. Thus these highly efficient tapping cabinets slide under the bar, for easier installation and more satisfactory service. Typical Perlick styling and quality! Available in 3 sizes-24" to 36" wide.

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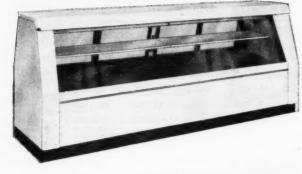


OWENS-CORNING

*FIBERGLAS is the trade mark (Reg. U. S. Pat. Off.) of a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

ATTENTION, DISTRIBUTORS!

A display case that really sells!





Increased facilities
now permit a
limited supply of
this superior
refrigerated display
case to a limited
number of new
distributors. A
request on your
company letterhead
will bring complete
information
and descriptive
literature.
Write today!

GOLDSMAN

Manufacturers of Commercial Refrigerators 1325 N. LAWRENCE STREET • PHILADELPHIA 22, PA.

COLOR ENLIVENS THIS GROCER'S OPEN CASE

Kansas City Supermarket Uses Bright-Hued Backdrop To Attract Customers' Attention

KANSAS CITY, Mo.—On the theory that the standard "whiteness" of open self-service refrigerators is not nearly so attractive as colorful display trim, the produce department of Milgram's supermarket, at 32nd and Troost here, has begun "decorating" its cases.

"decorating" its cases.

Illustrated is a typical Hussman-Ligonier self-service case which is used for produce green goods, such as carrots, cabbage, beets, celery stalks, lettuce, etc. Instead of the austere white appearance normally found for such refrigerators, Milgram's has covered the canopy of the box with a brilliant kodachrome reproduction of grapefruit, lemons and limes, supplied by California citrous packers.

The brilliant orange, green, yellow, and red colors used in this "backdrop" not only harmonize well with the actual produce shown beneath, but suggests fruit to customers buying produce, according to Raymond Reed, market manager.

In addition to thus festooning the upper canopy of the refrigerator with the fruit reproductions, the produce department likewise places colorful displays of related merchandise along the top.

"Open self-service refrigerators are no longer a novelty," Mr. Reed indicated, "and we have found that they may be made just as colorful as any other fixtures with a little planning."



Milgram's splashes color along the superstructure of its open-type, self-serve cases.

With 13,000 Air Conditioned Rail Cars Rolling, Comfort Cooled Stations Are Termed Vital to Traffic

 CHICAGO—Railroad stations, "hottest spots on earth" to travelers in air conditioned trains, soon may be as comfortable as the trains themselves, if some present trends carry through.

Postwar interest in air conditioning railroad stations and terminals of bus and air lines is at a high peak, it is reported by spokesmen of the Refrigeration Equipment Manufacturers-Association.

As one railroad man put it, "Most stations today were built to house the iron horse of another era and not the streamliner of today! But now, more than 13,000 railroad cars are air conditioned, and air conditioned stations are needed to keep pace."

The newly air conditioned station of the Texas and Pacific Railway in Shreveport, La., where extreme hot weather is commonplace, is an example of what can be accomplished in completely conditioning the air in a modern passenger terminal.

The temperature of the air inside this station is maintained automatically at comfortable levels depending on outside heat, and the relative humidity is held around 55%.

These comfort conditions are maintained throughout waiting rooms, and ticket offices on the first floor and offices of the railroad on the second

Hudson Functions On 3 Levels

FRESNO, Calif.—Frank Hudson, Inc. has been formed in Fresno, Calif., with a capital of \$75,000, to manufacture, distribute, and service air conditioning systems. Directors are: Franklin H. Hudson, Sr., Franklin H. Hudson, Jr., and Clarence

floor, a total area of more than 5,000 sq. ft.

Equipment consists of one 40-ton and one 50-ton air conditioning system with condensers and one dehumidifier in a penthouse on top the two-story station, and compressors, heat exchangers, and another dehumidifier in the basement where the power plant is situated. The same duct system used for air cooling in the summer is used for heating during the winter months.

Quonset Warehouse OK'd for Hollywood Appliance Dealer

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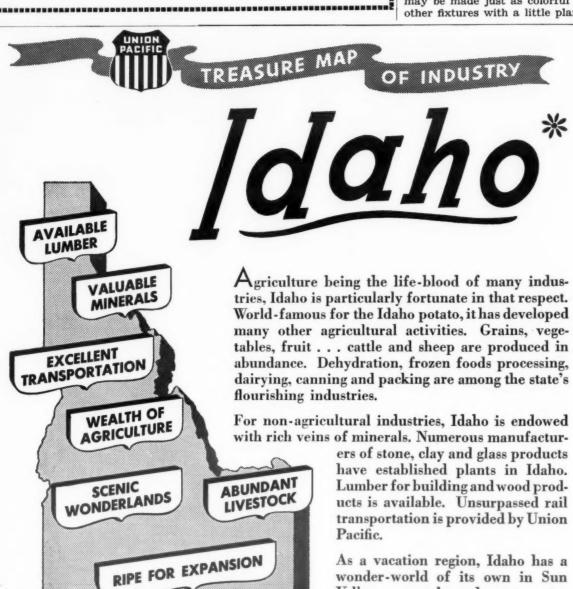
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HOLLYWOOD, Calif.—The Office of Housing Expediter, Division of Non-residential Construction, has granted a permit to erect a new warehouse building at 6410 Sunset Blvd., Hollywood, for Nicholson's Radio & Appliance Stores of that address. The Quonset structure will cost \$2,400.

Two Locker Plant Buildings In Minnesota and California Locations Approved by CPA

WASHINGTON, D. C.—Applications for the construction of two frozen food locker plants were approved during the week ending April 24 by the Civilian Production Administration.

Applications approved were those of F. R. Rykkon for construction of a locker plant at an estimated cost of \$10,748 in Swift county, Minn., and of Karl Oden for construction of a quick freeze and food locker plant at an estimated cost of \$15,000 in Tulare, Calif.



* One of a series of advertisements based on industrial opportunities in the states served by the Union Pacific Railroad. wonder-world of its own in Sun Valley...year-'round sports center ... the world famous primitive area ... and in the scenic surroundings of Payette Lake.

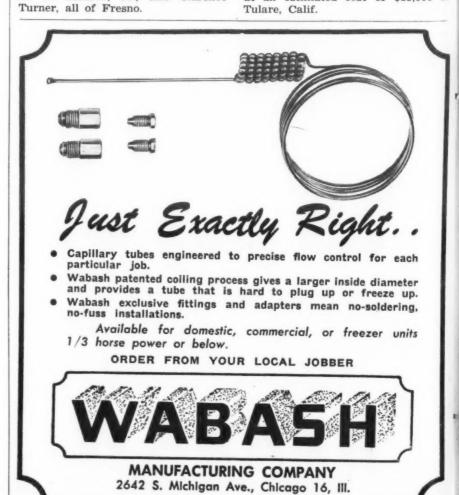
Idaho is a young thriving state, ripe for further industrial development. It offers good living and working conditions, good schools, splendid cultural advantages... and its energetic citizens assure newcomers of a true western welcome.

* Address Industrial Department, Union Pacific Railroad, Omaha 2, Nebraska, for information regarding industrial sites.



UNION PACIFIC RAILROAD

THE STRATEGIC MIDDLE ROUTE



36 Ft. of Self-Service Refrigerated Space Proves That Better Humidity, Fresh Appearance Sell More Produce

BELLEVILLE, Ill. — Three 12-ft. self-service refrigerators recently installed in Eckhardt's Supermarket here, are credited with increasing sales of perishable produce by more than 40%, by William Eckhardt, operator of two stores in the area.

The new custom produce refrigerators are among the largest ever installed in the Illinois-Missouri area, accommodating in 36 ft. of refrigerated space all but 10% of the produce carried by the store. One small "dry stand" at the right is used for onions, potatoes, apples, oranges, etc.—otherwise, everything else appears in the refrigerator cases.

These cases maintain a smooth temperature variable between 38 and 42° F., according to the produce contained. Below knee-level, there are 36 "understock compartments" which contain enough spinach, celery, lettuce, tomatoes, cabbage, etc., to refill the case completely once per day, just ahead of the peak season.

Each of the 12-ft. units is cooled by a ½-hp. compressor, circulating 'Freon-12" refrigerant through thinned fusion coils behind the reflecting mirror at the rear of the display space.

Increase in sales is attributed to the better humidity and better appearance of produce, according to

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The Eckhardt Supermarket in Belleville, Ill. where the use of the three 12-ft. cases has increased sales of perishable produce by 40%.

Mr. Eckhardt. There has been absolutely no spoilage loss since the refrigerator cases went into operation, and customers are invariably stimulated to buy larger amounts of produce for salads, the store has

Along with installation of the self-

service open produce refrigerators, the store installed two 10 x 12 ft. walk-in coolers, one for produce, and the other as a meat box. There is also a new 10 ft. fish case, which makes the Eckhardt Supermarket one of the most completely refrigerated stores in the area.

LOOKS GOOD, BUT CAN HE TAKE IT Small pumps, like prize-fighters,

Small pumps, like prize-fighters, must be able to "take it." Through

the years, Tuthill small pumps have proved their ability to perform dependably in handling pressure lubrication and other requirements. Leak-free performance, low power consumption and quiet operation are other advantages of these reliable mechanically-sealed pumps. Capacities up to 3 g.p.m. in wide pressure ranges. Many mounting types and porting arrangements. Write for Tuthill Model L bulletin.

TUTHILL PUMP COMPANY . 939 East 95th Street . Chicago 19, Illinois

St. Louis Tavern Devises Unique System for Chilling Beer, Water, and Meat From Single 1/2 Hp. Compressor-Blower Unit

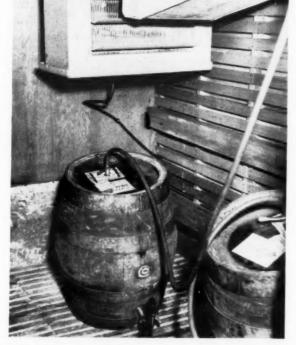
ST. LOUIS—"The Coldest Beer in St. Louis" is being served by the Gerli Tavern at 16th and Clark Aves. here, as the result of a novel refrigeration system which chills beer, water, and meat all from the same ½-hp. compressor-blower system.

Formerly using ice for beer cooling, the tavern management went to St. Louis Butcher Co.'s refrigeration department with some unusual problems. Due to limited space, it was desired to build a walk-in cooler for both meat and beer, with sufficient refrigeration to keep both at peak.

St. Louis Butcher Supply provided the answer by building two oak walkin boxes, each 7 x 8 ft. which are set side by side directly under the bar in the basement. The left walkin box is equipped with a coil and blower circulating 900 c.f.m. of air chilled to 25° F., sufficient for an overall 32° F. through both walk-in boxes.

The beer cooler section can accommodate 16 half kegs of beer in metal kegs, which are hooked up by rubber hoses to two 12 ft. Marlo coil copper tubes which extend up 12 ft. to the bar. These risers are carried up in an 8 x 4 in. galvanized metal duct which runs all the way to the beer taps. Air at 25° F. is forced up this duct, cooling the beer thus all the way to the tap, as well as two water lines also contained in the duct.

The cold air, after reaching the top,



how the beer line runs
12 ft. from the walk-in
cooler up to the bar.
The metalwork at the
top is part of the air
duct which runs all the
way to the beer taps
and cools fresh meat
on the return trip.

Picture at left shows

travels down a similar duct on the return trip, ending up at around 32° F. in the meat cooler, where sides of beef, hamburger, and short order meats are kept chilled.

About half of the total air supply reaches the meat box, found to be sufficient for any kind of cooling,

according to St. Louis Butcher Supply

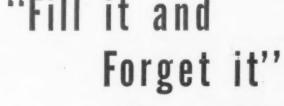
Total costs for refrigerating beer, water, and meat are approximately the same as for one meat box, ac-

cording to the tavern management.

No cases of bottled beer are kept in the walk-in cooler.



"Fill it and





with

Virginia SO₂

When you charge a system with "Extra Dry Esotoo," the job is done. You won't be called back to fix corroded lines, sludge stick-ups or frozen expansion valves. Why? Because Virginia "Esotoo" is pure, with an international reputation for high quality and dependability.

VIRGINIA SMELTING COMPANY, West Norfolk, Va.

Distributors for KINETIC'S "FREON" REFRIGERANTS





WEST NORFOLK . NEW YORK . BOSTON . DETROIT

TYPHOON

AIR CONDITIONING

The oversized 3, 5 and 7-ton TYPHOON units are the result of over 30 years experience in building air conditioning equipment capable of

delivering full capacity under

most trying conditions.



Every TYPHOON unit is made to deliver, year atter year, 12,000 BTU's of air conditioning performance for every ton of rating. The big cooling coil, the oversized condenser and other oversized parts are your assurance of customer satisfaction with a minimum of servicing.

TYPHOON PROP-R-TEMP UNITS ARE NATIONALLY ADVERTISED

Write for complete information and dealer territories still open

TYPHOON AIR CONDITIONING CO., INC.

Division of ICE AIR CONDITIONING CO., INC. BROOKLYN 15, N. Y. 794 UNION STREET

NEW NO. 47 CATALOG

NOW OFF THE PRESS

WRITE FOR COPY ON YOUR LETTERHEAD TODAY REFRIGERATION

AIR CONDITIONING HEATING

PARTS AND **SUPPLIES**

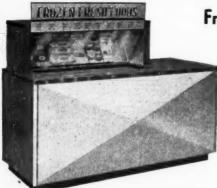
THE SUPPLY HOUSE THAT SERVICE BUILT

SERVICE PARTS COMPANY 2511 LAKE STREET, MELROSE PARK, ILL.



ROGERS

QUALITY LINE of Refrigeration



Frozen Foods Salesman

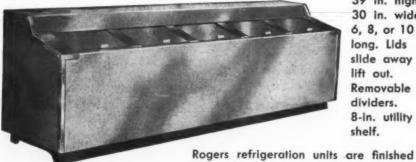
Shows them and sells them while maintaining proper temperature. Capacity 11.8 cu. ft. 5-in. Fiberglas insulation. Has heavy duty 1/4 H.P. compressor. Main box is 6 ft. by 29 1/2 in., 39 in. high.



Walk-in Cooler

All metal clad, inside and out (photo shows wooden door but new model has door of metal). Shiny and attractive in appearance and easy to keep that way. Built for permanence. Precision construction permits rapid and easy assembling. Two sizes: 6 by 8 feet and 6 by 6 feet, both 71/2 high.

Dry Beverage Cooler



39 in. high, 30 in. wide, 6, 8, or 10 ft. long. Lids slide away or lift out. Removable dividers. 8-in. utility shelf.

in Stainless Steel or polished Aluminum.

DEALERS WANTED

Write, wire or phone today for information on franchise.

W. ALLEN **BOX 272-AC**

Immediate Delivery!

DEMOPOLIS, ALA

What's New



Frigidaire Makes New Line of Bottle Coolers

DAYTON, Ohio - Frigidaire has started production of a complete new line of dry beverage coolers with selfcontained and remote type models already rolling off the production

Two, three, and four-lid forced air type beverage coolers are being manufactured with storage capacities ranging from 360 to 740 12-ounce A two-lid self-contained model, 76 in. long, will hold 360 bottles or 15 cases; a three-lid model, 98 in. long, will hold 550 bottles or 23 cases, and a four-lid model, 122 in. in length, will hold 740 bottles or 31 cases.

Cabinets are of steel construction and finished in bronze. Lids are easysliding and removable for restocking and fast service. Three inches of fibrous glass insulation minimizes moisture and heat leakage. A fan located at the bottom of the cabinet forces cool air throughout the storage compartment, first chilling bottles at the top. A baffle prevents the escape of cooled air through lid open-



Carl-Craft Introduces Freezer Model 122 STL

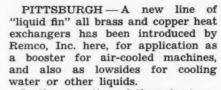
LOS ANGELES - A new model (122 STL) Ultra-Cold display type freezer has been announced by the Carl-Craft Mfg. Co. here.

Measuring 104 in. in length, 30 in. in width, and 36 in. in height, the new model has a capacity of approximately 22 cu. ft. or 775 lbs.

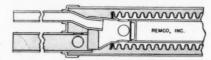
It features four "100% vision" Lucite sliding doors and adjustable cabinet dividers. The two toned cabinet has a stainless steel top and blue-white baked enamel sides.

Scientifically approved 5 in. insulation guarantees zero temperature, the company claims.

Remco Heat Exchanger Serves as 'Booster'



In the operation of these heat exchangers liquid refrigerant flows at line velocity inside the spiral corruga-



Design of "liquid fin" heat exchanger.

tions in direct or "prime" heat exchange relationship with the colder suction gases which travel, counter flow, over around and into the corrugations separated by the .015 in. wall of the "liquid-fin" heat exchanger element.

Soft annealed O.D. tube liquid and suction connections may be flared or sweat, bent to any desired shape, or in any direction, or shortened as desired for the particular job, the manufacturer states. All joints, inside and out, are silver soldered. End caps are formed or "cupped" to provide increased joint strength for the liquid and suction connections.

Because the suction gas is on the outside, Remco's heat exchangers may be installed inside or outside of the refrigerated space or fixture.

For general field application, selection may be made by matching suction and liquid line connection sizes with suction and liquid line sizes of the installation, since lower temperature jobs requiring heat exchangers of larger capacity also require larger condensing units, and hence larger line sizes.

The manufacturer cautions never to install a heat exchanger having smaller connections than the required line sizes since the pressure drop which may result will offset the advantage.

If a heat exchanger having greater capacity is desired, it is satisfactory to install one having connections larger than the line sizes by using reducing fittings.

Consumer Credit Is Near Prewar High

WASHINGTON, D. C .- A \$330,-000,000 jump during March brought consumer credit outstanding to a total of \$10,047,000,000-almost level with a high established just before Pearl Harbor.

According to Federal Reserve Board reports, the March upswing followed a seasonal decline that had lasted two months. Over the past 12 months credit for consumer goods buying has expanded \$3,059,000,000.



Sub-Zero Turns Out 2 New **Upright Freezer Cabinets**

MADISON, Wis.-Two new twotemperature freezer cabinets are now in production at Sub-Zero Freezer Co. here.

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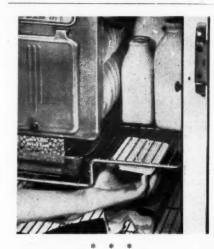
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Both are upright models, but vary in capacity. One cabinet has a 5-cu. ft. freezer (0°) capacity, and a 10-cu. ft. high temperature (40°) space. The other provides a 15-cu. ft. freezer capacity, and an 18-cu. ft. high temperature compartment.

Sub-Zero now manufactures two chest type models with 13.6 and 20cu. ft. capacities, besides their standard 16-cu. ft. upright model. Larger freezers with 30 and 60-cu. ft. capacities are also in production.



'Air King' Deodorizer Set In White Plastic Case

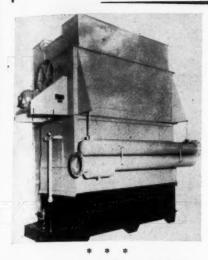
LOS ANGELES-A new refrigerator deodorizer is now being marketed through jobbers by the Inter-Coastal Co., Inc., of Los Angeles.

Called "Air-King," the new deodorizer contains adsorbent chemicals plus safe, active chemicals which, it is claimed, will destroy refrigerator odors.

Measuring 31/4 x 41/2 x 1 in., it has a white plastic case which holds the chemicals in a spill-proof cloth bag. The case is wrapped in a cellophane jacket for protection before



What's New (Cont.)



Aero Unit Dehumidifies, Cools Compressed Air

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NEW YORK CITY-Niagara Blower Co. here has announced the development of a new design Aero "After Cooler" for cooling compressed air and condensing and removing the water vapor, which is contained

Principle of the new cooler is the evaporative cooling of the compressed air, accomplished by passing it through coils in a spray chamber where atmospheric air is drawn through by fans, evaporating a portion of the recirculating spray water, the manufacturer explains.

It is claimed that the newly designed equipment provides greater efficiency by arranging the compres-

SODA FOUNTAIN AND

INSTANTANEOUS

Patented Temprite principle of direct heat transfer guarantees top efficiency,

accurate temperature control. Even

during peak rush periods, unit will deliver perfectly cooled liquids. 18-8 corrosion-resistant stainless steel coils safely handle all carbonated or non-

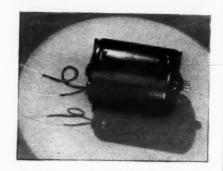
carbonated beverages. Six models to serve either 1, 2 or 3 different beverages.

TEMPRITE PRODUCTS CORP.

sed air coils laterally across the spray chamber and introducing the compressed air through an oversized manifold, placed lengthwise on the outside of the casing. Then the compressed air is withdrawn to the receiver through a similar manifold.

The result is said to be the reduction of friction of the compressed air in the coils and the securing of greater contact with the evaporating spray, thereby bringing the compressed air temperature closer to the wet bulb temperature of the atmospheric

Since the compressed air temperature reached is always lower than the dry bulb temperature of the ambient air, condensation of water in the compressed air lines and tools is prevented, according to the com-



Fairchild Designs 14 oz. Series Universal Motor

JAMAICA, N. Y .- A 14 oz. series universal motor designed for small household, commercial, or automotive appliances has been introduced by the Fairchild Camera & Instrument Corp. here.

The motor, known as Type 597, can be wound for ratings of 1/20, 1/40, and 1/70 hp. at 117 volts, and for 6 volt operation, the company declared.

Overall dimensions of the motor are 31/4 in. by 27/32 in. The 1/20-hp. motor is available for immediate delivery, the company stated, while the others are made to special order.

The ½0-hp. motor is rated at 4.0 in.-oz. torque at 12,700 r.p.m. for a 56° C. temperature rise on a onehour duty cycle, the company asserted. Starting torque is 15 in.-oz. and the no load speed is 20,000 r.p.m.

The 1/40-hp. motor is rated at 3.0-in.-oz. torque at 8,400 r.p.m. for a 52° C. temperature rise on a onehour duty cycle. Starting torque is 10 in.-oz. and the no load speed is 15,000 r.p.m.

The 1/70-hp. motor is rated at 2.5 in.-oz. torque at 5,800 r.p.m. for a 40° C. temperature rise. Starting torque is 5 in.-oz. and no load speed is 10,000 r.p.m.

Fairchild has stated that the basic tooled parts of the Type 597 motor may be wound, within the limits of the motor size, to various combinations of wire sizes to meet voltage and speed output requirements in many small application fields.

This allows for variations in shaft diameter and extension, various mounting holes, and modifications in speed-output ratings, it added.

> Gleaming, nent, Heavy, Polished

interior.

with blower.

Stainless Steel front and sides, and complete Stainless Steel

56 racks, and spa-

cious general utility compartments. Adjustable wire shelves. 70 cu. ft. Two large doors and two small doors. 3" fiber glass insulation. Equipped

Model SSDRR70

L. 80" D. 33" H. 71"

Model SSDRR47

L. 58" D. 33" H. 73"

Apex Electrical Co. Takes Long-Term Loan

CLEVELAND-An agreement for a 15 year \$2,500,000 loan has been signed by directors of the Apex Electrical Mfg. Co. here to permit long term financing of the company's expanded volume of business, a recent letter to stockholders revealed.

This long term loan will liquidate an outstanding six year term loan of \$1,500,000 and will reduce outstanding short term bank loans by \$1,000,-000, the letter said.

The loan is repayable at an annual rate of \$179,000 with 31/2 % annual interest.

The letter pointed out that Apex is producing approximately twice as many units as prewar with 21/2 times the prewar dollar value.

Detroit Contractors To Discuss Surplus Exchange

DETROIT - J. S. Jervis, district manager of the Century Electric Co., has been scheduled to address the Refrigeration Contractors Association of Detroit May 22 on the subject of refrigeration motors and their applications, Frederick R. Bolton, executive secretary of the Association, has

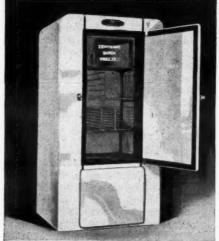
The question of providing a medium of exchange for surplus materials between members of the Association is on the agenda for discussion, Mr. Bolton added.

The meeting will be held at the Hub Kafeteria, 13534 Woodward Ave., Highland Park, he said. The meeting is scheduled to start at 8 p.m., the secretary said.

Gen. Wainwright Will Be Advisor To Viking

SAN ANTONIO, Tex.-Gen. Jonathan M. Wainwright, "Hero of Bataan" and present Fourth Army commander with headquarters here, will, in addition to other duties, become an advisor on public relations for Viking Refrigerators, Inc. of Kansas City, Mo. when he retires from the army in late August or early September, it was announced.

Arthur S. Bird, who is vice president and treasurer of Viking as well as president of the Bird-Shankle Corp., wholesale grocery firm here, said that Gen. Wainwright would become associate general director and vice president of San Antonio's Hom-Ond stores and director of public relations.



Wilson "ZEROSAFE" Model FF-15 Farm Freezer

WILSON "ZEROSAFE" FREEZERS ARE TIME-TESTED

WILSON "ZEROSAFE" REACH-IN FARM FREEZERS ARE YEARS AHEAD

Since 1939 enthusiastic users of Wilson "ZEROSAFE" Freezers have acclaimed the Wilson-pioneered features of front-opening conven ience, adequate sizes, real usability and long, efficient life.

Now brought to the peak of its development as a truly great farm and home freezer, the "ZEROSAFE" combines all the great TIME-TESTED Wilson features in ten new models ranging from 15 cu. ft. to 120 cu. ft. in capacity, finished in the gleaming beauty of white baked-on enamel, ready to win new thousands of life-long "ZEROSAFE" friends. If your merchandising plans include the selling-and-servicing of a complete line of modern freezers that are outstanding in quality and leadership, let's exchange information today. Address Desk 11.

WILSON REFRIGERATION, INC. SMYRNA DELAWARE

NEW PROFITS for AIR COOLER DEALERS

Comfort Evaporative Cooling units supply 5 to 10 thousand c. f. m. of fresh, washed, filtered air cooled up to 96% of wet-bulb cooling efficiency. AS "PANTS" KEEP A DOG COOL

YOUR panting dog with his big, moist tongue is one example of Nature's gigantic cooling system—"Evaporative Cooling." Another—man's most highly gigantic cooling system-"Evaporative Cooling perfected evaporative cooling plant—is the Comfort 4-Way Air Washer. With its flood of fresh outside air, washed, filtered, cooled—crowding the air ducts of your building—you have an ever-flowing sea breeze, "cool and refreshing as a spring morning."

Do YOU live ... work ... sleep ... where the summers are scorching hot and dry? Have you a summer problem of sleepless nights ... listless and irritable workers ... zest-less customers and "poor business"? Buy yourself an all-summer "sea breeze" and set it flowing through your office, plant, shop, home. Install a Comfort and watch your family, business personnel, customers perk up. Comfort and watch your family, business personnel, customers perk up.

Through years of peace and war, the Comfort Air Washer has brought natural, Through years of peace and war, the Comfort Air Washer has brought natural, economical Evaporative Cooling to near-perfection . . . setting new standards that assure cool comfort indoors throughout hot, dry regions. Drawn in by its big turbine blower, a great stream of fresh outside air flows through a foot-thick curtain of atomized water and water-drenched Fiberglas mats. Here a tremendous absorption of heat energy takes place as the dry airstream "tears the water dous absorption of heat energy takes place as the dry airstream "tears the water day and eagerly sucks up its evaporated particles. So Comfort Evaporative apart" and eagerly sucks up its evaporated particles. So Comfort Evaporative Cooling chills the airstream by as much as 83% to 96% of scientific "wet-bulb" Cooling (10° to 25°) and diffuses it through the building, not as a "draft" but a b-r-e-e-z-e-cool, balmy and refreshing.

Comfort Air Washers are now bringing cool-as-spring indoor living and working conditions to millions at work, at play, at home—"pushing back the jungle"
of scorching, debilitating heat throughout wide geographical ranges (excepting
of scorching debilitating heat throughout wide geographical ranges (excepting
of scorching supply of fresh, washed, filtered, cooled air to you in your
of on ever-flowing supply of fresh, washed, filtered, cooled air to you in your
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COMFORT COOLER LEADERSHIP in the Great **New Industry** of Evaporative Cooling.

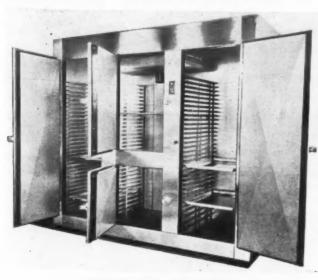
As Advertised in • FORTUNE

• BUSINESS WEEK and 30 Other Media

. FILTERS . COOLS . CHANGES . WASHES

43 PIQUETTE AVE. . DETROIT 2, MICHIGAN

Heavy Duty STAINLESS STEEL DOUGH RETARDER by FRIGITEMP



IMMEDIATE DELIVERY

Also a complete line Reach-Ins. Stainless Steel 50-65 cu. ft. Steel with porcelain interior, Dulux exterior, adjustable shelves to 60 cu. ft. Remate and Self-Contained Models, with or without machines.

FRIGITEMP CORPORATION 931 Bergen St., Brocklyn 16, N. Y.

COMFORT PRODUCTS CORPORATION 2220 LAMESA . DALLAS 2, TEXAS



WATCH FOR THIS DISPLAY!

You will find this attractive display of THAWZONE and TRACE, illustrated here, on the counters of leading refrigeration equipment wholesalers throughout the country. Let it remind you that:

(1) THAWZONE, the moving dehydrant, circulates and searches out moisture, destroying it chemically. For new and reconditioned units, as well as old.

(2) TRACE is a highly effective refrigerant leak detector. Its stable red color reveals leaks instantly in old or new systems.

These two products are partners in purpose . . . to keep refrigeration systems at the height of efficiency.

HIGHSIDE CHEMICALS COMPANY

195 VERONA AVE.,

NEWARK 4, N. J.

Of New Duluth-Superior Contractors Association

DULUTH, Minn.—The Refrigeration Contractors Association, Duluth-Superior area, has just been formed, with Ken Draver, Superior Refrigeration Service, Superior, Wis., as president.

Other officers elected are: Orval Hursh, Hursh Refrigeration & Appliance, Superior, vice president; Roy Hammerstedt, General Appliance Co., Duluth, Minn., secretary-treasurer; and Ted Luck, Gartner Refrigeration Co., Duluth, sergeant-at-arms.

The board of directors comprise the officers and Wyman Collier, Town & Country Mart; E. Dahlin, Baxter Co.; Fred Mosher, Fred Mosher Co.; and E. Muccilli, Duluth Fixture Co.—all of Duluth.

It becomes the twenty-first local association to affiliate with the National Association of Refrigeration Contractors; and adopted the model Constitution and By-Laws worked out and suggested by NARC.

Gilbert R. Sterling Joins Cox-Frank Corp. In Norfolk

NORFOLK, Va.—Gilbert R. Sterling, who formerly headed a service branch here for York Corp., has joined the Cox-Frank Corp. to handle erection and maintenance service operations for air conditioning, industrial and commercial refrigeration, and heating, the Cox-Frank Corp. has announced.

Mr. Sterling, who studied engineering at the Norfolk division of William and Mary, at Virginia Polytechnic Institute, and at Duke univerity, has had experience in installing and servicing all types of "Freon" and ammonia air conditioning and refrigerating systems.

Servicing Truck Refrigeration Units

Editor's Note: Further details regarding the design, operation, and servicing of truck refrigeration systems employing eutectic or hold-over plates are presented in this instalment, which discusses the specific problems of removing moisture, testing for leaks, and the amount of refrigerant required for truck plate systems. This section of the series was prepared with the assistance of Kold-Hold Mfg. Co., Lansing, Mich., a manufacturer of truck plates.

Instalment No. 34

Moisture In System

Presence of moisture in any refrigeration system will likely cause trouble. Systems using hold-over pletes are no different in this respect from conventional refrigeration hookups. Moisture troubles are best prevented by using every precaution to eliminate the possibility of moisture entrance at the time the original installation or replacement is made.

Moisture in a system can cause the expansion valve to freeze up; internal parts to corrode due to the formation of acids; compressor oil to become gummy; and compressor valves to stick.

Use of a good dryer can eliminate moisture in "Freon" or methyl chloride. Kold-Hold Mfg. Co. recommends dryers filled with silica gel.

Dryers charged with calcium chloride should be used only as a last resort and should never be allowed to remain in a system for more than a few hours, according to Kold-Hold.

When a dryer is used it should be located between the receiver and heat exchanger in the hot portion of the liquid line, and it should be recharged or replaced until it is certain that all moisture has been eliminated from the system.

If moisture continues to be indicated in the system after a dryer has been used, there is probably a leak in the low side which permits the entrance of moisture-laden outside air when the low side is operating at below atmospheric pressure. Air in the system is also indicated by a serious rise in head pressure.

Testing for Leaks

To test for leaks, and this should be done after a newly installed system has been completely connected and inspected, use refrigerant under pressure. Do not use air pressure, because compressed air in ordinary shop air pressure lines contains moisture. Oxygen should likewise not be used, for this may produce a serious explosion.

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For proper leak tests, connect the truck system to the receiver of the condensing unit or directly to a service drum of refrigerant, and admit enough refrigerant to purge off all the air contained in the lines and plates.

Next close the suction make-andbreak valve or the suction service port on the condensing unit and permit refrigerant to build up a pressure of at least 50 to 100 lbs. if possible, Slowly and carefully check all joints for leaks, using a Prestolite or Halide leak detector for "Freon-12" or methyl chloride. If ammonia is the refrigerant, check for leaks with a sulphur stick flame.

If these standard items of leak-testing equipment are not available, presence of leaks can be checked by filling the system with refrigerant, shutting all valves, and noting the pressure. If the pressure has not dropped after three hours, the system is quite probably tight. A drop in pressure would indicate leaks, but they would probably be difficult to locate without leak test equipment.

Refrigerant Charge

The amount of refrigerant to be put in a truck plate system depends on the kind of refrigerant, size of plates, and number of plates. In Table 2 are listed the various amounts for different plates and refrigerants, totals being listed for both working charges and the maximum plate capacity.

To determine the required refrigerant charge multiply the listed amount for the size of plate used by the number of plates used and add to this total another 2 to 10 lbs. to enable the condensing unit to maintain a seal in the receiver tank.

The amount of oil to be placed into a system depends only on the requirements of the compressor. Follow the recommendations of the condensing unit manufacturer.

Table 2—Refrigerant Charges for Truck Plates

	Methyl	Chloride	"Free	n-12"	Ammonia		
Plate Size (Inches) (2% in. thick)	Working Charge (Lbs.)	Maximum Capacity (Lbs.)	Working Charge (Lbs.)	Maximum Capacity (Lbs.)	Working Charge (Lbs.)	Maximum Capacity (Lbs.)	
24 x 50	3.13	6.25	4.61	9.22	2.11	4.21	
24 x 58	3.62	7.25	5.34	10.68	2.44	4.88	
30 1/8 x 58	4.62	9.25	6.80	13.60	3.11	6.21	
30 1/8 x 66	5.08	10.16	7.50	15.00	3.43	6.86	
36 1/8 x 66	6.78	13.56	10.00	20.00	4.57	9.14	
36 1/8 x 50	5.32	10.64	7.84	15.68	3.59	7.17	
27½ x 58	4.62	9.25	6.80	13.60	3.11	6.21	



Genuine FACTORY COMPRESSOR EXCHANGE

★ BRUNNER
★ CHIEFTAIN
★ COPELAND
★ LEHIGH

★ MILLS ★ UNIVERSAL COOLER

Complete stock of pumps on hand for exchange - at all times

LIACE REFRIGERATION SUPPLY COMPANY

546-48 West 119th St., Chicago 28, Illinois



Self-Service Case Speeds Ice Cream Sales

An open type frozen food case has permitted Al Harris (right), dairy operator in Salt Lake City, to pre-package hand-dipped ice cream for self-service sales. Mr. Harris believes this merchandising plan will speed up sales and give his customers ice cream in much better condition. He's already found out after only three week's operation that this method cuts his sales force in half and effects other economies.

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Case Ups Profits - -

(Concluded from Page 1, Column 4) and the girl usually has plenty of spare time to prepare enough cartons for the weekend rush.

Every package is accurately weighed. This is important, points out Mr. Harris.

"If a girl is dipping ice cream into a package during the weekend rush, she may put too much ice cream into the package or too little. The customer will object is there's too little, and he'll be insulted if the girl takes ice cream out of an over-filled package," he says.

Another advantage cited by Mr. Harris is that this method permits the ice cream to be sold at a much

BIG PRICE .

Large Quantity of CONDENSING UNITS

1/3 H.P. Air Cooled-Close Coupled With TECUMSEH Compressor-Complete with motor-

Sharply reduced for immediate sale! CONTROLDTEMP CORP.

236 Butler St. - Brooklyn 17, N. Y. MAin 4-7957

CARRENE NO. 1

- Cut your moisture problems.
- No other refrigerant will operate satisfactorily in a Grunow refrigerator.
- Write for Service Manual and name of nearest Distributor.

AUTHORIZED SERVICE, INC.

lower temperature so that it will remain firm and cold longer. Ordinarily, he says, ice cream for hand dipping must be kept warm enough to permit its being scooped out and thus it will soon melt.

With pre-packaging, however, the carton is stored at temperatures ranging from -10° to 0° after it has been filled and packaged, and will not melt for a much longer time.

The self-service feature also permits much more rapid handling of customers. No longer is there a big crowd jamming the store on weekends waiting to be served. (Most customers, says Mr. Harris, prefer hand-dipped ice cream, even though it is more expensive than the conventional "factory-packaged" varie-

"You'll never see more than a dozen people in the store even at the busiest time. They merely have to look over the display in the open case, select a package, and pay the cashier. This also means that we won't have to arrange for a large parking lot," he adds.

As part of his revised merchandising plan, Mr. Harris also will have insulated bags for those customers who, for example, buy ice cream to take to a picnic. Just a little dry ice in the bag will keep the prepackaged ice cream in perfect condition for several hours, he says.

To keep overhead at a minimum, he also suggests that the ice cream store operator purchase cartons which have not been labeled for a particular flavor of ice cream. Mr. Harris uses a rubber stamp to label packages for the flavor that is to be packaged at a particular time. This prevents a dealer from becoming overloaded with cartons of a certain variety.

The success of the venture so far prompts Mr. Harris to predict that his ice cream sales should break all records this year. He also offers the suggestion to the frozen food indus try that it could perhaps profit by using cellophane packages to reveal the contents of the package.

STYLED FOR PERFORMANCE

Larkin refrigeration products, made by the originators of Cross Fin Coils, combine industrial beauty with flawless performance. Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Evaporative Condensers - Air Conditioning Units -Instantaneous Water Coolers—and other top ranking factors in industrial and commercial refrigeration.



519 MEMORIAL DRIVE . S.E. ATLANTA . GEORGIA

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Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

CENTRAL SERVICE SUPPLY

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Phone 5-4000 & 3-0313 Phone 3-4000

ASHVE Program --

(Concluded from Page 1, Column 3) technical sessions. The afternoons have been set aside for the social and entertainment events.

According to a tentative program, sightseeing trips will be made to Old Town, Ramona's Wedding Place, and Balboa on Monday and to Old Mexico on Wednesday. A harbor cruise and inspection of the Navy Yard is scheduled for Tuesday.

Golfers will compete for the Research and Eichberg cups Monday afternoon at the San Diego Golf Club. Other sports are planned.

Technical-session talks on Monday will cover heat transfer, thermal properties of buildings, and the society's research program. Tuesday's papers are to discuss water cooling, evaporative coolers, and cooling panels, and on Wednesday the subjects will include comfort and health, air sterilization, comfort conditions, and weather data.

Names of the speakers have not as yet been announced.

Following is the preliminary pro-

MONDAY, JUNE 2

10:00 a.m.—Research Session, Ball room. Papers on heat transfer, thermal properties of buildings, and the society's research program.

12:30 a.m.—Luncheon.

12:30 p.m.—Deep-sea fishing trip. 2:00 p.m.-Roads to Romance-Old Town, Ramona's Wedding Place, Balboa Park. (Buses leave west entrance of hotel.).

Golf tournament—Research Cup and Eichberg Cup, San Diego Golf Club.

p.m.—Dinner, main dining 6:30 room.

TUESDAY, JUNE 3

9:00 a.m.—Registration, lobby. 10:00 a.m.—Technical Session, Ball Room. Papers on water cooling, evaporative coolers, cooling panels.

12:30 p.m.—Luncheon. 7:00 p.m.—Banquet, Main dining room. Dancing in Circus room.

WEDNESDAY, JUNE 4

10:00 a.m.—Technical Session, Ball Room. Papers on comfort and health, air sterilization, comfort conditions, weather data.

12:30 p.m.-Luncheon.

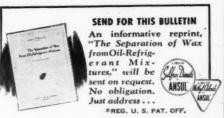


- The temperature at which wax separates from an oil in oil-refrigerant mixture is influenced by three determining
- 1. The nature of wax in the oil.
- 2. The amount of wax in the oil.
 3. The amount of oil in the oilrefrigerant mixture.

Different oils possess different wax separation characteristics.

The nature and amount of wax content varies in different oils and may even vary in different samples of supposedly the same oil taken from different ship-

These inconsistencies confuse the engineer in his efforts to select or recommend suitable lubrication for low temperature refrigerating systems and, to



alleviate this condition, Ansul Chemical Co. is ready and anxious, at all times, to co-operate with refrigeration engineers and refrigeration service engineers.

REMEDIES

To eliminate wax trouble in expansion valves and coils:

1. Use an oil which separates little or no wax from its mixture with the refrigerant at the operating temperature of

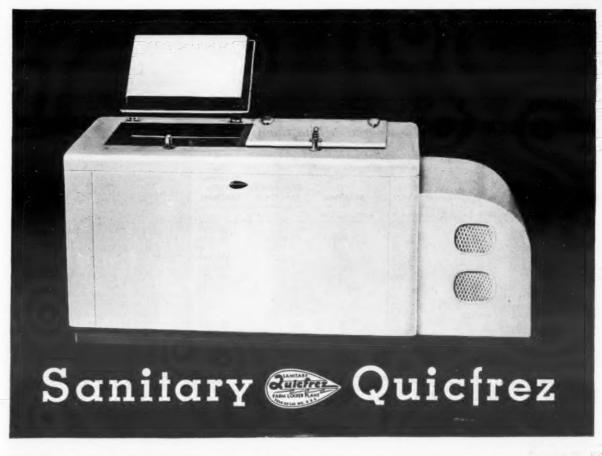
2. Install an oil trap to cut down the amount of oil (and consequent wax) circulating with the refrigerant.

ANSUL WHOLESALERS are ready and equipped to render an intelligent, co-operative service to refrigeration engineers and maintenance men on problems which arise from time-to-time in the operation of refrigerating systems.

FOR EXAMPLE:
Samples of refrigeration oils, submitted by users of Ansul Refrigerants to Ansul Wholesalers, are tested by Ansul laboratories without charge by the Ansul Wax Separation Method. This method, developed and standardized especially for use in connection with oils used in refrigerating systems, provides an accurate determination of wax separating from oil-refrigerant mixtures at low temperatures.

ANSUL REFRIGERANTS ARE AVAILABLE AT LEADING WHOLESALERS EVERYWHERE





THE PIONEER OF FARM LOCKER PLANTS NOW READY FOR IMMEDIATE DELIVERY

Built to the highest quality standards throughout.

Complete, with Condenser Units-ready for you to install.

Everything about the "QUICFREZ" Farm Locker Plant is engineered and built for years of dependable service. Thousands in daily operation since 1939.

Valuable Exclusive ter-ritory open. Write or wire for franchise infor-mation. Sanitary has several good openings for salesmen.

SANITARY REFRIGERATOR COMPANY

FOND DU LAC

WISCONSIN

ICE REFRIGERATORS FOR MORE THAN 40 YEARS - QUICFREZ FARM LOCKERS SINCE 1939

Air Conditioning, Commercial Refrigeration Shipments For the Fourth Quarter of 1946

Table 1-Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Summary of Shipments by Major Class of Product, Third and Fourth Quarters 1946

		Total Value		nipments of omestict Value		xport‡ Valu
Product	No.		No.	(dollars)	No.	(dollars
Section	I-Co	mponents a	nd Acces	sories		
Total		36,870,171		34,897,759	****	1,972,41
Condensing units	269.136		258,835		10,301	1,236,46
Ammonia refrigerants	317	393,636	292		25	36,72
Refrigerants except ammonia.	268.819	18,669,347	258,543	17,469,604	10,276	1,199,74
Air cooled	253.896	13,448,971	244,575	12,586,624	9,321	862,34
Water cooled	14.923	5,220,376	13,968		955	337,39
Compressors, compressor units	81 117	4,678,259	78,475		2,642	241,82
Ammonia refrigerants	625	1,371,101	561		64	135,04
Refrigerants except ammonia		3,307,158	77.914		2,578	106,78
Centrifugal refrigeration	00,100	0,001,000	,	4,,	_,	
machines	78	1,724,066	75	1,671,406	3	52.66
Heat exchanger equipment		11,404,863	****	40 000 004		441,46
	1,453	1,391,866	1,379	1,317,962	74	73,90
Unit coolers	55 084	5,506,059	53,405	5,274,081	1,679	231,97
Air conditioning	4 660	1,215,739	4,580		80	56,78
Refrigeration	50 494	4.290,320	48,825		1.599	175,19
Other heat exchanger	00, 141	1,400,040	30,020	3,140,120	1,000	210,20
		4,506,938		4,371,351	****	135,58
equipment§			****			
Section II—Self-Contained	l Air	Conditioning	Units a	nd Absorpti	on Syste	ms
Self-contained air conditioning						
units	14,365	6,390,796	12,991	5,915,682	1,374	475,11
Store type	4,855		4,736		119	108,92
Room type	9,510	2,119,615	8,255	1,753,428	1,255	366,18
Miscellaneous air conditioning and refrigeration equipment, including absorption						
systems	****	2,640,287	****	2,571,043		69,24
418	Thir	d Quarter	1946 Sh	ipments of	Comple	ete Unit
	7	Total	Do	mestict	Es	cport#
		Value		Value		Valu
Product	No.	(dollars)	* T	(3-11)		/dollare
			No.	(dollars)	No.	(donars
Section	I—Con	nponents an			No.	(donars
		nponents an	d Access		****	1,616,324
Total		*31,106,294	d Access	ories *29,489,970	****	1,616,32
Total	83,354		d Access	ories	7,123 29	1, 616,32 925,69
Total	83,354 260	*31,106,294 14,379,003	176,231 231	*29,489,970 13,453,306	7,123	1,616,32 925,69 25,33
Total	83,354 260 83,094	*31,106,294 14,379,003 255,584 14,123,419	176,231 231 176,000	*29,489,970 13,453,306 230,246 13,223,060	7,123 29	1,616,32 925,69 25,333 900,35
Total Condensing units	83,354 260 83,094 72,855	*31,106,294 14,379,003 255,584 14,123,419 10,742,050	176,231 231 176,000 166,664	*29,489,970 13,453,306 230,246 13,223,060 10,121,535	7,123 29 7,094	1,616,32 925,69 25,333 900,355 620,516
Total Condensing units	83,354 260 83,094 72,855 10,239	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369	176,231 231 176,000 166,664 9,336	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525	7,123 29 7,094 6,191 903	1,616,32 925,69 25,333 900,35 620,516 279,84
Condensing units	83,354 260 83,094 72,855 10,239 32,207	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536	176,231 231 176,000 166,664	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611	7,123 29 7,094 6,191	1,616,32 925,69 25,33 900,35 620,51 279,84 268,92
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586	176,231 231 176,000 166,664 9,336 30,401 756	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182	7,123 29 7,094 6,191 903 1,806 101	1,616,32 925,69 25,33 900,35 620,51 279,84 268,92 160,40
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536	176,231 231 176,000 166,664 9,336 30,401	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611	7,123 29 7,094 6,191 903 1,806	1,616,32 925,69 25,33 900,35 620,51 279,84 268,92 160,40
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950	176,231 231 176,000 166,664 9,336 30,401 756 29,645	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429	7,123 29 7,094 6,191 903 1,806 101 1,705	1,616,32 925,69 25,333 900,35 620,514 279,844 268,92 160,40 108,52
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319	176,231 231 176,000 166,664 9,336 30,401 756 29,645	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,622,611 1,477,182 *2,151,429 1,851,891	7,123 29 7,094 6,191 903 1,806 101 1,705	1,616,32 925,69 25,333 900,355 620,511 279,844 268,921 160,40 108,521
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319 10,902,436	176,231 176,000 166,664 9,336 30,401 756 29,645	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162	7,123 29 7,094 6,191 903 1,806 101 1,705	1,616,32 925,69 25,333 900,355 620,511 279,84 268,921 160,40 108,521 75,421 346,274
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89	*\$1,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319 10,902,486 1,301,117	176,231 176,000 166,664 9,336 30,401 756 29,645 84 	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387	7,123 29 7,094 6,191 903 1,806 101 1,705	1,616,32 925,69 25,33; 900,35; 620,51; 279,84; 268,92; 160,40; 108,52; 75,428; 346,27; 72,730
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 3,897,536 1,637,586 *2,259,950 1,927,319 10,902,486 1,301,117 4,670,426	176,231 231 176,000 166,664 9,336 30,401 756 29,645 84 1,106 46,566	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387 4,546,427	7,123 29 7,094 6,191 903 1,806 101 1,705 5 68 1,018	1,616,32 925,69 25,33 900,35 620,511 279,84 268,92 160,40 108,52 75,42 346,27 72,73 123,99
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 1,963	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 *2,259,950 1,927,319 10,902,436 1,301,117 4,670,426 1,022,304	176,231 231 176,000 186,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125	7,123 29 7,094 6,191 903 1,806 101 1,705 5 68 1,013	1,616,32 925,69 25,33; 900,35; 620,51; 279,84; 268,92; 160,40- 108,52; 75,42; 346,27; 72,73(123,99) 19,17;
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 1,963 45,616	*\$1,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319 10,902,436 1,301,117 4,670,426 1,022,304 3,648,122	176,231 176,000 166,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908 44,658	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302	7,123 29 7,094 6,191 903 1,806 101 1,705 5 	1,616,32: 925,69' 25,33: 900,35: 620,51! 279,84' 268,92: 160,40' 108,52: 75,42: 346,274' 72,73: 123,99: 19,175 104,820
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 1,963 45,616	*\$1,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319 10,902,436 1,301,117 4,670,426 1,022,304 3,648,122	176,231 231 176,000 186,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302	7,123 29 7,094 6,191 903 1,806 101 1,705 5 68 1,013	1,616,32 925,69 25,33 900,35 620,51 279,84 268,92 160,40 108,52 75,42 346,27 72,73 123,99 19,17 104,82
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 1,963 45,616	*\$1,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 *2,259,950 1,927,319 10,902,486 1,301,117 4,670,426 1,022,304 3,648,122 4,930,893	176,231 231 176,000 166,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908 44,658	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,161,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302 4,781,348	7,123 29 7,094 6,191 903 1,806 101 1,705 5 68 1,013 55 958	1,616,32 925,69 25,33 900,35 620,511 279,84 268,92 160,40 108,52 75,42 346,27 72,73 123,99 19,17 104,82 149,54
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 1,963 45,616	*\$1,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 *2,259,950 1,927,319 10,902,486 1,301,117 4,670,426 1,022,304 3,648,122 4,930,893	176,231 231 176,000 166,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908 44,658	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,161,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302 4,781,348	7,123 29 7,094 6,191 903 1,806 101 1,705 5 68 1,013 55 958	1,616,32: 925,69' 25,33: 900,35' 620,51! 279,84' 268,92: 160,40' 108,52: 75,42: 346,27' 72,730 123,99: 19,17's 104,820'
Condensing units	83,354 260 83,094 72,855 10,239 32,207 31,350 89 1,174 47,579 1,963 45,616	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319 10,902,436 1,301,117 4,670,426 1,022,304 3,648,122 4,930,893 onditioning	176,231 231 176,000 166,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908 44,658	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,161,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302 4,781,348	7,123 29 7,094 6,191 903 1,806 101 1,705 5 68 1,013 55 958	1,616,32 925,69 25,33; 900,35; 620,51; 279,84; 268,92; 160,40 108,52; 75,42; 346,27; 72,73; 123,99; 19,17; 104,820; 149,545
Condensing units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 45,616 Air C	*\$1,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 *2,259,950 1,927,319 10,902,486 1,301,117 4,670,426 1,022,304 3,648,122 4,930,893 onditioning	176,231 176,000 186,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908 44,658	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302 4,781,348 ad Absorption	7,123 29 7,094 6,191 903 1,806 101 1,705 5 	1,616,32 925,69 25,33 900,35 620,511 279,84 268,92 160,40 108,52: 75,42 346,27 72,73 123,99 19,17 104,82 149,54 189,21
Condensing units Ammonia refrigerants Refrigerants except ammonia.1 Air cooled Water cooled Compressors, compressor units Ammonia refrigerants Refrigerants except ammonia. Centrifugal refrigeration machines Heat exchanger equipment. Evaporative condensers Unit coolers Air conditioning Refrigeration Other heat exchanger equipments Section II—Self-Contained Self-contained air conditioning units	83,354 260 83,094 72,855 10,239 32,207 857 31,350 89 1,174 47,579 45,616 Air C	*31,106,294 14,379,003 255,584 14,123,419 10,742,050 3,381,369 *3,897,536 1,637,586 *2,259,950 1,927,319 10,902,436 1,301,117 4,670,426 1,022,304 3,648,122 4,930,893 onditioning	176,231 231 176,000 166,664 9,336 30,401 756 29,645 84 1,106 46,566 1,908 44,658	*29,489,970 13,453,306 230,246 13,223,060 10,121,535 3,101,525 *3,628,611 1,477,182 *2,151,429 1,851,891 10,556,162 1,228,387 4,546,427 1,003,125 3,543,302 4,781,348 ad Absorption 5,123,016	7,123 29 7,094 6,191 903 1,806 101 1,705 5	1,616,32 925,69 25,33 900,35 620,511 279,84 268,92 160,40 108,52 75,42 346,27 72,73 123,99 19,17 104,82 149,54 188

Table 2—Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Purchases for Incorporation Into Complete Units or for Resale, Fourth Quarter 1946

1,290,766

*Revised. †Continental United States. ‡Includes Canada, Mexico, and United States territories. §Includes condensers and liquid coolers, shell and tube and shell and coil types, as well as fin coils (heating and cooling), and plate type evaporators.

1.263.831

26,935

and refrigeration equipment,

483 MAIN STREET

including absorption

Product	Complete Units (number)	Compressors or Compressor Units (number)	Condensers (number)	Total Purchase Value (dollars)
Section I—Com	ponents ar	d Accessories		
Total		****	****	1,323,80
Condensing units	. 3,453	6,646	6,223	751,194
Ammonia refrigerants	. 0	0	0	(
Refrigerants except ammonia	. 3,453	6,646	6,223	751,194
Air cooled	. 2,397	6,032	5.728	376.501
Water cooler	. 1,056	614	495	374.693
Compressors and compressor units	. 52	****	****	7,924
Ammonia refrigerants	. 0	****		(
Refrigerants except ammonia	. 52		****	7.924
Centrifugal refrigeration machines	. 0	0	0	0
Heat exchanger equipment				564.689
Evaporative condensers	. 96	****		177.056
Unit coolers		****		218,156
Air conditioning	. 3			1,600
Refrigeration	. 240	****		216,556
Other heat exchanger equipments		****		169.477
Section II—Self-Contained Air Co	nditioning	Units and Abso	rption System	18
Self-contained air conditioning units		1,100	0	59,453
Store type	. 30	60	0	20,141
Room type	. 0	1,040	0	39.312
Miscellaneous air conditioning and refrigeration systems, including absorption systems		all and take and		
§Includes condensers and liquid cod	ners or she	eu and tube and	snell and co	on type

as well as fin coils (heating and cooling) and plate type evaporators.



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fied style. Box addresses count as nive words, other addresses by actual word

POSITIONS WANTED

POSITION AS service man or shop fore-man. Many years experience in all types of domestic and commercial service, up to 160 ton plants. Have also taught re-frigeration classes in Civil Service. I have a family and will consider any locality, except N. E. ROY COYLE, Gridley,

REFRIGERATION SERVICE trainees: graduates of intensive 8 month course on commercial and domestic refrigeration servicing desire on-the-job training; willing to go anywhere in the United States. For further information write William B. Arpe, Placement Manager, MASSACHU-SETTS TRADES SHOPS SCHOOL, 271 Huntington Ave., Boston 15, Mass.

SERVICE ENGINEER with thorough knowledge, 20 years actual experience. Capable of handling any phase of service or installation, refrigeration, air conditioning, locker plants. Up to date on latest developments and practices. Prefer South or Southwest. A. E. MEAD, Box 96, Kingsville, Texas.

REFRIGERATION, AIR-CONDITIONING, heating technician, resident of Glendale, 27, married, finishing 15 months schooling at the Milwaukee School of Engineering at the Milwaukee School of Engineering. Prefer position with training leading to application sales engineer. Los Angeles area. Address replies to Mr. C. W. Tuell, 1020 North Broadway, Milwaukee, Wisconsin.

MANUFACTURERS' REPRESENTATIVE with proven sales record among heating and refrigeration jobbers and manufacturers will give your line personalized attention. Specialty lines requiring service and engineering background preferred. Headquarters Detroit. BOX 2305, Air Conditioning & Refrigeration News.

SALES AND promotion man would like to work in Europe and near East. Mechanical and electrical engineering college. 15 years experience in refrigeration expert in quick freezing. 45 years old. Experience in export and well acquainted with economical setup in Europe. BOX 2355, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WANTED: EXPERIENCED commercial and domestic serviceman. Modern shop now employing 4 men. Increased volume now employing 4 men. Increased volume creates opening for right man. Truck furnished. Salary right. Steady work, no lay-offs. Excellent town and climate. One of the best trout fishing and hunting areas in the United States. DETWEILER BROS., INC., Twin Falls, Idaho.

SERVICE MANAGER-wanted by largest distributor of electrical appliances in New England. Must have thorough knowledge of conventional household refrigerators and Bendix washers. Write or phone
Mr. S. Shanfield, THE EASTERN COMPANY, 620 Memorial Drive, Cambridge,
Massachusetts. Telephone Trowbridge

SOUTHERN ESTABLISHED refrigeration company handling air-conditioning com-mercial and locker plant installations desires services of energetic men to expand sires services of energetic men to expand operation. Three salesmen, one engineer, service manager, three servicemen required. Attractive monthly salary guaranteed with incentive bonus plan. For confidential attention address application to BOX 2347, Air Conditioning & Refrigaration News eration News

HIGHEST PRICES paid for Grunow units and compressors in any condition. BOX 2350, Air Conditioning & Refrigeration

EXPERIENCED COMMERCIAL refrigeran salesman to represent manufacturer commercial refrigeration. Car essen-l. Exclusive territories. BOX 2351,

WANTED-EXPERIENCED refrigeration salesman as factory-to-dealer representa-tive for farm and institutional upright freezer manufacturer. Two men required: (1) Southern New England States' (2) Indiana, Illinois, Kentucky. Should have associated lines and be familiar with farm trade. Give full particulars and three business references, BOX 2354, Air Conditioning & Refrigeration News.

LARGE REFRIGERATION distributor hes excellent opportunity for salesman with good commercial background. Salary and commission \$10,000 to \$15,000 per year. Fine engineering and service departments to assist sales. Must own car and live in Chicago. Write full details giving age, experience, references, etc. BOX 2358, Air Conditioning & Refrigeration News.

WANTED-ADVERTISING and sales promotion manager. Reputable manufac-turer of farm milk coolers, farm freezers and commercial refrigeration equipment located in the East, has permanent position with good salary range. Write BOX 2362, Air Conditioning & Refrigeration

EQUIPMENT FOR SALE

FOR SALE: 8-Bush finned colls (new) 18" wide—127" long. Model A26-½-120 complete with cork insulated bunkers capacity 550 B.T.U. each—Bargain. AFFILIATED REFRIGERATION SERV-ICE, 917 Eight Ave., N.Y.C.

MOTORS AND condensing units—available at once—½-½-½-½ Universal condensing units with or without motors. Special—six hole ice-cream cabinets with ½ hp. Copeland units less motors \$225. Also beverage coolers, beer equipment, stainless steel reach-in freezers. ALBROD CORP., 318 West 48th St., New York City 19, CI 6-9100.

IMMEDIATE DELIVERY—new air condi-tioning equipment. Weathermakers com-plete with motor, "Freon" coil, etc. tioning equipment. Weathermakers com-plete with motor, "Freon" coil, etc. 2 ton to 25 ton. SWSI, DWDI, and twin centrifugal blowers, propeller fans, heating and cooling coils, evaporative condensers, self-contained air conditioning units, condensing units. CONTROLDTEMP CORP., 236 Butler St., Brooklyn 17, N. Y.

FOR SALE—AC motors ½ to 3 hp. single and 3 phase, list price. Immediate delivery. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

SACRIFICE OVERSTOCKED inventory of new condensing units, compressors, motors, and self-contained air conditioners. Sizes from 1½ HP to 50 HP, includes Carrier, Universal, Trane, etc. Wire for prices. E. M. FAIRBANKS CO., 145-03 7th Avenue, Whitestone, L.I., N.Y.

REFRIGERATOR DOORS, Jamison standard infitting double gasket, 3 hinges, latch, frame and sill, 6 inch cork insulation, opening 6' x 2' 6", also dual batten vestibule doors attached. All doors metal clad. \$65.00 per set, E. M. FAIRBANKS CO., 145-03 7th Ave., Whitestone, L.I., N.Y.

QUALITY BOBTAIL fountains; reach-ins, QUALITY BOBTAIL fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St.. Brooklyn 16. MA 2-9093. St., Brooklyn 16. MA 2-9093.

PANELECTRIC AUTOMATIC ice cube makers, automatic models—freezes 1800 cubes per day. HAAS SALES & SERV-ICE, 203 Butler St., Pittsburgh 23, Pa.

1 HP MEAT AND bone cutter machines. Popular make complete with single phase motors. Brand new in original factory crates. Immediate delivery. HARRIS crates. Immediate delivery. HARRIS COMMERCIAL REFRIGERATION CO., 123 North Perry St., Attica, Ind.

½ HP CONDENSING units—air cooled, complete with motor and control. Available immediately. Price—\$140.00 less motor and control—\$95.00. 25% deposit required with order. Balance SDBL or COD. FOB Columbus, Ohio. KOLD DRAFT COLUMBUS, INC., 334 Marconi Blvd., Columbus 15, Ohio. Main 1583 and Main 3422.

NEW MOTORS, heavy duty repulsion induction, single phase, 110-220 volts, 60 cycle, available immediately. ½ HP—\$40.00, ¾ HP—\$53.00, 1 HP—\$60.00, 1½ HP—\$72.00. 25% deposit required with order. Balance SDBL or COD. KOLD DRAFT COLUMBUS, INC., 334 Marconi Blvd., Columbus 15, Ohio. Main 1583 and Main 3422.

DEHUMIDIFIERS FOR sale-#6 Bryant silica-gel dehumidifier, #6 dry air cooler, automatic Solenoid water valve, listat, suitable for room 24' x 25' humidistat, suitable for room 24' x 25' x 12'. Also #14-R Bryant silica-gel dehumidifier. air cooling coil, fan. motors: temperature and humidity controls, distribution ducts. Immediately available. MASTER RULE MFG. CO., 201 Main St., White Plains,

AVAILABLE IMMEDIATELY-2 ft., 6 ft., LH, special freezer doors. 6-inch insulation. Front, back of door of heavy gauge metal. Beveled wood sill, three hinges, roller fastener. Batten doors back of frame. \$70.00 each F.O.B. Boston. Quantity prices quoted. IRA E. MC FARLAND, 500 Fifth Avenue, New York, N. Y.

1000 MOTORS, FOR sale, from stock % hp.—3425 RPM—3 ph/230 V. (Underrated—easily equal to % hp.) Ballbearing, for vertical or horizontal. Enclosed Fr. % in. shaft. \$36 each. This rugged motor cannot burn out. (Glass insulated wire coils.) MODERN SUPPLY CO., 206 Fulton St. New York, 200, 2000 Fulton St., New York 7-CO 7-0100.

NEW FRICK "Freon" condensing units, 3 phase, 60 cycle, 220 volt, water cooled. 3 HP @ \$375.00; 5 HP @ \$595.00. F.O.B. Charleston, W. Va. Quantity imited. If interested answer immediately.

MOUNTAIN STATE DISTRIBUTORS,
INC., 830 Pennsylvania Ave., Charleston 2,
W. Va.

SECTIONAL WALK-IN coolers, kiln dried fir front, spruce interior. Chrome hardware, metal saddle, finished shellac 4 in. Fiber \$1.20 for freezers 6 in. Fiber \$1.40 per sq. ft. Cork insulation prices on request. Limited number new refrigeration units coils, etc. available. Send us your requirements. REFRIGERATION SPECIALTIES, INC., 721 Flushing Ave.. Brooklyn 6, N. Y.

FLOAT REPLACEMENTS. For replacing defective high side floats on all household units. Regular charging connection. capillary tube setup, internal strainer and exact mounting plate. Part #2000-Westinghouse (4 hole plate), and #2010 (3 hole plate): Part #2020-Gibson Part #2030-General Electric (DR-1 & DR-2). Part #2040-For general replacement (undrilled plate). \$6.75 each SEALED UNIT PARTS CO., 3097 Third Ave., New York 56.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$6.75 (Part No. 1020) Installation tool \$1.65. Immediate delivery Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York

ATTENTION JOBBERS: Replacement pistons for Crosleys. The only available supply in the middle west. In standard and oversizes. Dealers and servicemen: complete condensing units, ¼s and ⅓s-brand new. SQUARE DEAL SUPPLY CO., 904 N. Illinois, Indianapolis 4, Indiana.

UNDER BAR type beverage coolers manufactured by General Refrigerators Corporation, NYC, eight foot length thirty case capacity, stainless steel sliding covers, black crackle finish, complete with coil and blower. Regular dealers price \$265.00. Special now \$165.00 FOB Log Angeles. Compressors also available.
WEST PICO APPLIANCE CO., 5812 West Pico Blvd., Los Angeles 35, Calif.

Bure

Air

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Produ

Tota

amm

1 hp

2 hr

Water

1/8 h 1/2 h 1/4 h 1 hp 11/2

2 hp 3 hp 5 hp 7½ 1 10 h 15 h 20 h 25 h 30 h 40 h 50 h 60 h 75 h

5 hp.

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ONE WESTINGHOUSE CLS2550 75 HP compressor with 50% capacity reduction and CWC-120 water cooled condenser and LC3400 water chiller. \$7,579.00. F.O.I Wichita Falls plus back freight. Ne Wichita Falls plus back freight. New equipment in original crates. BOX 2348, Air Conditioning & Refrigeration News.

FOR SALE—Two Carrier plug type units with 7½ HP 220-3-60 motor. Air coled complete with insulated panel and low side and water defrost. Located in New York State. Used on temporary work for three months. In excellent operating condition. BOX 2353, Air Conditioning & Refrigeration News

FOR SALE-Mfrs. surplus at less than market price. "Stangard" prime surface cold plates, size 12 x 62". Also a quantity of Eastern Engineering coolant pumps, of Eastern Engineering coolant pumps, model SD-102, and a quantity of 1/30 hp. enclosed P. & I. motors, 1750 R.P.M. single phase A.C. BOX 2356, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

LIVE, GOING refrigeration, water pump. LIVE, GOING refrigeration, water pumping equipment, appliance and farm supply business, long established, with excellent earning record. Our jobber business necessitates giving up this fine retail business. More interested in well-qualified buyer than in asking price as we have many long-established customers. Write S. R. CARTER COMPANY, Burlington Vermont lington, Vermont.

FOR SALE—Going refrigeration and sales business in Southern California. Established over 10 years. Annual gross, \$150,000. Sale includes 3 late-model service trucks, fully-equipped shop, electrical motor rewinding facilities, 2-line telephone weighbor for remaining facilities. telephone, valuable franchises for commercial equipment sales, lease. Advertising in effect. \$25,000, plus inventory. Address BOX 2340, Air Conditioning & Refrigeration News.

FOR SALE: Commercial refrigeration sales and service business, including refrigeration equipment franchise. Located in central Michigan. Has been established for fourteen years. BOX 2343, Air Condi-tioning & Refrigeration News.

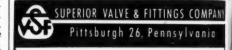
FOR SALE

2-NEW 5 TON CHRYSLER AIRTEMP PACKAGE ROOM COOLERS

1-NEW 3 TON CHRYSLER AIRTEMP PACKAGE ROOM COOLER

1000-1/25 HP SHADED POLE, TOTALLY ENCLOSED, FAN COOLED ROUND **BODIED MOTORS**

BOX 2352. AIR CONDITIONING & REFRIGERATION NEWS



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Bureau of Census Figures on Fourth Quarter of '46 Air Conditioning, Commercial Refrigeration Shipments

Table 3-Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Shipments by Type of Product, Fourth Quarter 1946

75 HP duction er and er and F.O.B. New 2348, ews. units choled low in New rk for grown than urface antity umps, 30 hp. Condi-

pump-upply cellent siness retail well-ce as mers, Bur-

and

ornia, gross, model elec-2-line

com-ertis-ntory.

ation g re-cated

ER

ER

	Production of Units Incorporate In Unitary Equipment Made in	d	Shipn Fotal Value		Complete Umestic† Value			No. of
Product .	Same Plant	No.	(dollars)	No.	(dollars)	No.	(dollars)	
Frounce	Sect	ion I—C	omponents	and Acc	essories			
		****	36,870,171		34,897,759		1,972,412	7
Total Condensing Units								
Total		269,136	19,062,983	258,835	17,826,520	10,301	1,236,463	3
Refrigerants exce	ept							
ammonia, total	66,065	268,819	18,669,347	258,543	17,469,604	10,276	1,199,743	
Air cooled, total		253,896	13,448,971	244,575	12,586,624	9,321	862,347	29
1/2 hp. and und	er. 19.681	116,163	2,763,468	115,021	2,699,288	1,142	64,180	13
	25,515	39,608	2,234,769	37,827	2,117,504	1,781	117,265	
1/4 hp		61,654	3,853,133	58,044	3,560,935	3,610	292,198	
% hp	7,847	20,061	1,839,621	18,615	1,683,171	1,446	156,450	
84 hp		7,958	1,045,984	7,282	945,411	676	100,573	
1 hp	1.147	4,008	655,210	3,735	611,781	273	43,429	2
1½ hp		2,561	544,601	2,359	503,541	202	41,060	2
2 hp	1,291	1.369	332,188	1.217	296,757	152	35,431	1
3 and 5 hp		514	179,997	475	168,236	39	11,761	1
Water cooled, to	tal 1.853	14,923	5,220,376	13.968	4,882,980	955	337,396	2
		803	81,361	760	77,434	43	3.927	
70 -	724	1,602	211,423	1,549	205,592	53	5,831	1
	,	1,547	248,014	1.434	229,833	113	18,181	1
% hp	279	1,744	331,117	1.596	303,280	148	27.837	1
1 hp	,	1.572	358,183	1.441	327,907	131	30,276	
		1,828	554,916	1,767	537,807	61	17.109	
2 hp		2,611	908,331	2,430	846,924	181	61,407	2
3 hp		1.656	833,328	1.538	773.282	118	60.046	
5 hp		539	367,602	495	337.336	44	30,266	
7½ hp		330	268,067	317	256,001	13	12,066	
10 hp		189	196.341	175	183,016	14	13,325	
15 hp		148	200.751	142	191,470	6	9,281	1
20 hp		135	176.210	128	167.569	7	8,641	-
25 hp		64	95,485	53	82,495	11	12,990	
30 hp		85	165.977	80	156,640	5	9,337	
40 hp		22	53.563	20	49,083	2	4,480	
50 hp		16	42,646	11	30,250	5	12,396	
60 hp		32	127.061	32	127.061	0	12,330	
75 hp. and ove		34	127,001	96	121,001	U	0	,
mmonia refriger								
Reciprocating wa	iter	217	202 626	292	356,916	25	36,720	
cooled, total		317	393,636	44	27,301	20	1,488	
5 hp. and unde		46	28,789			3		
7½ hp		53	46,906	50	43,766		3,140	
10 hp		69	70,329	66	67,089	3	3,240	
15 hp		80	117,779	74	110,021	6	7,758	
20 hp. and ove	r	69	129,833	58	108,739	11	21,094	ŧ

787 2 2	•	C 1
I able		Continued

		Ship		Complete Un		port‡	No. of Plants
Product	No.	(dollars)	No.	Value (dollars)	No.	(dollars)	Report- ing
rroduct				Accessories	210.	(dollars)	
Compressors and com-	0.000						
pressor units, total Refrigerants except	81,117	4,678,259	78,475	4,436,439	2,642	241,820	23
ammonia, total	80,492	3.307.158	77,914	3,200,378	2,578	106,780	21
% hp. and under		1,852,230	73,858	1,808,306	2,436	43,924	
1 hp		43,289	780	43,009	4	280	
1½ hp	- 86	8,528	46	6,023	40	2,505	
2 hp	805	57,674	795	57,009	10 21	665	
	820 678	73,308 135.119	799 677	70,349 134,737	1	2,959 382	
5 hp	151	56,396	137	52,969	14	3,427	
10 hp.	175	89,271	170	86,841	5	2,430	
15 hp	119	71,496	116	68,912	3	2,584	
20 hp	150	141,287	136	131,420	14	9,867	_
25 hp	84	108,105	81	103,592	3	4,513	
30 hp	31	44,029	30	42,923	1	1,106	6
40 hp	93	147,861	91	144,684	2	3,177	7
50 hp	111	194,453	87	165,492	24	28,961	
60 hp	71	131,220	71	131,220	0	0	
75 hp	18	56,648	18	56,648	0	0	
100 hp. and over	22	96,244	22	96,244	0	0	3
Ammonia refrigerants, total	00"	1 071 101	F01	1 000 001	0.4	105 040	
total 5 hp. and under	625	1,371,101	561 17	1,236,061	64	135,040 568	
7½ hp	63	7,280 $33,592$	55	6,712 29,738	8	3,854	
10 hp.	97	56,144	92	53,715	5	2,429	
15 hp	61	55,154	52	47,115	9	8,039	
20 hp.	64	66,588	57	60,414	7	6,174	
25 hp.	17	24.159	15	21,410	2	2,749	
30 hp	59	93,799	50	79,775	9	14,024	
40 hp	54	106,369	48	95,411	6	10,958	
50 hp	35	82,220	32	76,729	3	5,491	3
60 hp	17	59,823	17	59,823	0	0	
75 hp		139,417	37	131,227	4	8,190	
100 hp.		188,113	48	175,378	4	12,735	
101 to 200 hp	23	122,999	23	122,999	0	0	
201 hp. and over	23	335.444	18	275,615	5	59,829	4
Centrifugal refrigeration	n						
machines (water and brine chilling), total.	78	1,724,066	75	1,671,406	3	52,660	4
Heat exchanger	10	1,724,000	10	1,071,100	0	0.000	*
Evaporative condensers.	****	11,404,863	****	10,963,394		441,469	48
total	1.453	1,391,866	1,379	1,317,962	74	73,904	22
5 tons and under	341	74,312	330	71,507	11		12
5.1 to 7.5 tons	91	38,465	83	34.610	8	3.855	11
7.6 to 10 tons	152	82,855	147	80,726	5	2,129	
10.1 to 15 tons.	146	99,834	137	93,777	9	6,057	16
15.1 to 20 tons	87	87,661	87	87,661	0	0	16
20.1 to 30 tons	234	243,168	222	232,182	12	10,986	16
30.1 to 50 tons	287	416,106	263	383,817	24	32,289	17
50.1 to 100 tons	93	235,660	91	230,517	2	5,143	15
Over 100 tons	22	113,805	19	103,165	3	10,640	3
Air conditioning		5,506,059	53,405	5,274,081	1,679	231,978	36
remote type, total	4,660	1,215,739	4,580	1,158,953	80	56,786	18
3 tons and under	3,025	162,721	3,025	162,721	0	0	9
3.1 to 5 tons	267	93,854	252	88,523	15	5.331	13
5.1 to 10 tons	350	150,548	338	146,716	12	3,832	14
10.1 to 25 tons	688	498,443	652	466,587	36	31.856	18
Over 25 tons	330	310,173	313	294,406	17	15,767	9

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Eventually every shelf in every Refrigerator will be a Stainless Steel Shelf

Makers of REFRIGERATOR SHELVES .

Refrigeration, total . Ceiling and wall	50,424	4,290,320	48,825	4,115,128	1,599	175,192	31
mounted, total 2,000 B.t.u./hr. and	48,998	3,001,083	47,456	2,884,283	1,542	116,800	28
under	15 766	566,544	15,459	554,046	307	12,498	13
		366,023	10,947	352,999	305	13,024	15
2,001-4,000 B.t.u./hr.			5,053	272,857		11,488	18
4,001-6,000 B.t.u./hr.		284,345				25,886	21
6,001-8,000 B.t.u./hr. 8,001-12,000	4,780	341,124	4,454	315,238			
B.t.u./hr	5,229	472,401	5,055	452,527		19,874	18
B.t.u./hr	4.060	478.652	3,826	444,895	234	33,757	20
Over 18,000 B.t.u./hr.		491,994	2,662	491,721	2	273	10
Floor mounted dry	_,000						
type, total	1.072	778,803	1.055	766,776	17	12,027	17
		4,530	17	4,207	2	323	6
Under 2 tons						4,596	13
2 to 5 tons		237,142	471	232,546			
5.1 to 7.5 tons		194,856	257	191,433	4	3,423	12
7.6 to 10 tons	114	136,715	112	135,694	2	1,021	11
10.1 to 15 tons	155	150,416	152	147,752	3	2,664	8
Over 15 tons	46	55,144	46	55,144	0	0	4
Floor mounted spray							
type, total		510.434	314	464,069	40	46,365	11
5 tons and under		33,420	31	29,648		3,772	6
		226,071	133	216,971		9,100	8
5.1 to 7.5 tons							6
7.6 to 10 tons		69,525	32	39,310		30,215	40
Over 10 tons	121	181,418	118	178,140	3	3.278	6
Other heat exchanger							
equipment, total Condensers, shell and	****	4,506,938	****	4,371,351	****	135,587	32
tube and shell and coil		685.230	****	653,060	****	32,170	16
Liquid coolers, shell and tube		232,368	****	224,356	****	8,012	13
Liquid coolers, shell and coil	****	24,427		24,361	9119	66	6
Fin coils—heating other than forced							
air units	****	826,075	****	820,142	****	5,933	10
other than forced							
air units Evaporators,	****	1,701,437	****	1,655,640	****	45,797	19
plate type		1,037,401	****	993,792	****	43,609	7
Section II—Self-C		d Air Cond	itioning	Units and	Absorption	Systems	
Self-contained air condi-	-						
tioning units, total		6,390,796	12,991	5.915.682	1.374	475.114	15
Store type, total		4,271,181	4,736	4,162,254	119	108,927	14
2 and 3 tons		574,743	962	550,984	39	23,759	12
5 tons		2,599,004	3.202	2,535,739	71	63,265	11
							7
7.5 tons		293,310	239	290, 221	3	3,089	
10 tons		299,632	160	293,188	3	6,444	6
15 tons and over		504,492	173	492,122	3	12,370	7
Room type, total	9,510	2,119,615	8,255	1,753,428	1,255	366,187	8
Window sill type		939,107	5,098	936,485		2.622	3
Floor type		1,180,508	3.157	816,943		363,565	4
			0,201	010,010	1,200	300,000	3
discellaneous equipment absorption systems .		2,640,287	****	2,571,043	****	69,244	13



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ASRE Program--

(Concluded from Page 1, Column 2) tory, and the annual ASRE golf tournament. A "well known movie personality" whose identity is to be revealed later will address the traditional welcome luncheon Monday noon, June 9.

A luncheon and fashion show at Bullock's Wilshire department store and a shopping tour of "Miracle Mile" shops have been planned for women attending the meeting. Among other social activities is a cocktail party Sunday, June 8, for early comers and a cocktail party and buffet supper Tuesday.

Results of recent studies in the application of refrigeration to plant growth will be revealed during the technical presentations by Dr. F. W. Went, of the California Institute of Technology. A paper on recent research on the accurate measurement of air flow in the laboratory is to be given by D. D. Wile, Carrier Corp.

J. C. Rear, Union Ice Co., San Francisco, and W. T. Pentzer, plant physiologist, Department of Agriculture, will discuss engineering and biological considerations in hydrocooling and precooling of produce. "Refrigeration In Motion Picture Laboratories" is the subject to be presented by Arthur J. Hess, of Hess, Greiner & Polland, Los Angeles.

The tentative program follows:

SUNDAY, JUNE 8

1:00 p.m.—Executive committee luncheon-meeting.

1:00 p.m.—Sections committee luncheon-meeting.

7:00 p.m.—Council dinner-meeting.

MONDAY, JUNE 9

10:00 a.m.—First Session—R. H. Money, president of ASRE, presiding. "Refrigeration in Motion Picture Laboratories"—Arthur J. Hess, Hess Greiner & Polland, Los Angeles.

"Mechanism of Heat Transfer, Panel Cooling and Heat Storage"—C. S. Leopold, consulting engineer, Philadelphia.

"Surface Temperatures and Heat Flow for a Concrete Slab with an Imbedded Grid of Pipes"—Carl F. Kayan, Columbia university, New York City.

1:00 p.m.—Welcome luncheon (speaker to be announced).

TUESDAY, JUNE 10

9:30 a.m.—Second Session—Clifford F. Holske, vice president of ASRE, presiding.

"Economical Location of a Quick Freezing Plant"—Frank W. Knowles, Knowles & Callender Engineering Co., Seattle, Wash.

"Quick Freezing of Shrimp In the Gulf Coast Area"—F. D. Graham, York Corp., New Orleans.

"Regulation of Food Freezing Action"—William J. Finnegan, Los Angeles and Thomas F. Carter, W. J. Finnegan Co., Los Angeles.

12:30 p.m.—Publications committee luncheon-meeting; group luncheons, to be arranged as required.

2:00 p.m.—Third Session—Burgess H. Jennings, vice president of ASRE, presiding.



"Use of Refrigeration and Air Conditioning In the Growing of Plants"—F. W. Went, University of California, Pasadena, Calif.

"Biological Considerations in Hydrocooling and Precooling"—W. T. Pentzer, plant physiologist, U. S. Department of Agriculture, Fresno, Calif.

"Engineering Considerations In Hydrocooling and Precooling"—James C. Rear, general manager of plants, Union Ice Co., San Francisco.

WEDNESDAY, JUNE 11

9:30 a.m.—Fourth Session—Paul B. Christensen, treasurer of ASRE, presiding.

"Water Treatment and the Control of Scaling In Evaporative Condensers"—Ralph M. Westcott, Los Angeles.

"Air Flow Measurement In the Laboratory"—Daniel D. Wile, de-

velopment department, Carrier Corp., Syracuse, N. Y.

"New Developments in Refrigerant Lubricants"—Edgar S. Ross, development division, Sun Oil Co., Philadelphia.

ENTERTAINMENT EVENTS

Sunday, June 8

5:30 p.m.—Reception and cocktail party. Los Angeles Section, host.

Monday, June 9

1:00 p.m.—Welcome luncheon, speaker to be announced later.

2:30 p.m.—Inspection trips. Golf tournament. Tour through movie and broadcasting studios. Sightseeing trip.

Tuesday, June 10

6:00 p.m.—Cocktail party, buffet supper, and entertainment.

8:00 p. m.—Dinner-dance at Earl Carroll's Theater-Restaurant.

Wholesalers Get --

(Concluded from Page 1, Column 4) ance shipped an informative label or information tag which would describe the principal sales features of the item

The basic facts which information

- tags should include is as follows:

 1. Model or catalog number.
- Capacity; dimensions.
 Features—operation—how to use
- 4. How it is made.
- 5. How it should be cared for.
- 6. What it will do.7. Statement of warranty.
- 8. Price.9. Name and address of manufac-
- turer.

 It was said that the consumer would like such an information tag

because he trusts the printed word, and the tag gives him a basis for comparison. The salesman was said to like it because it makes his work easier—the answer to most of the questions put by a prospect would be summarized on such a tag.

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A report by the sales promotion and sales training committee revealed that a 77% increase in the number of appliance dealers has been recorded since before the war. The committee report urged that greater attention be given to sales training, and said that distributors must take the lead in this work.

E. B. Ingraham, president, Times Appliance Co., Inc., New York City, was elected president of Newa.

George F. Kindley, vice president, Edgar Morris Sales Co., Washington, D. C., was elected chairman of the Appliance Division, and also a vice president of the association.

